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A QUARTERLY JOURNAL OF MARITIME HISTORY



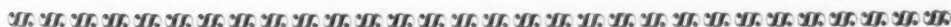
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PUBLISHED BY THE AMERICAN NEPTUNE, INCORPORATED
SALEM, MASSACHUSETTS

\$6.50 a year

\$1.75 a copy

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Volume XII. No. 3
July 1952

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SALEM, MASSACHUSETTS

Published by The American Neptune, Incorporated, Salem, Massachusetts

Printed by The Anthoensen Press, Portland, Maine

Collotype plates by The Meriden Gravure Company, Meriden, Connecticut

THE AMERICAN NEPTUNE

A Quarterly Journal



of Maritime History

VOLUME XII

JULY 1952

NUMBER 3

IN 1840 Richard Henry Dana published *Two Years Before the Mast*, a story which, ever since, has remained one of the classics of American maritime literature. But the brief journal upon which Dana based that great book has never before been printed and we are pleased to publish this important document in this number of **THE AMERICAN NEPTUNE**.

We also print in the following pages another in the series of articles by Richard LeBaron Bowen, Jr., on Arabian craft. We regard these articles as among the most important we have published for they contain many facts not hitherto printed anywhere and a number of others which have never before appeared in English. There will be at least two more articles from the pen of Mr. Bowen before he has exhausted his material on this hitherto little written of field.

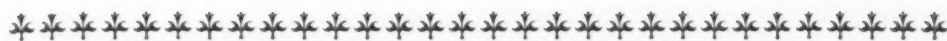
Ruminating, as editors sometimes do, on other problems in the maritime field awaiting only someone with the knowledge, energy, and time to tackle them, the thought occurred that there are several such problems close at hand and one of these is, so far as this writer is aware, untouched.

A good many pages have been written on the history and development of the New England pinky and others have been written lamenting that

boat's extinction. Illustrations of the last pinkies to survive along the coast have appeared occasionally and, from time to time, there is a story about them in one of the newspapers. And the New England pinky is extinct but there is another pinky so much like it, that the connection must be more than accidental, that is far from extinct. On the outer northern coast of the Gaspé Peninsula where great laminated cliffs rise sheer from the waters above the Gulf of St. Lawrence, the folk who dwell in the little villages surrounding the poorly sheltered coves at the foot of these cliffs are primarily fishermen and among the boats they use are small, two-masted, schooner-rigged pinkies. They love bright colors in the European fashion or in the eighteenth-century American fashion for their pinkies are frequently painted red, blue, or green. The waters here are rough and often stormy and the harbors poorly sheltered, so a good sea boat is needed and no boat was ever more noted for its able qualities in rough water than the pinky. Here is an opportunity for someone to spend a few weeks, take photographs, take the lines off some of these craft, find out who built them and if they are still built, and work out the connection between them and New England-built pinkies. And it is a job that should be done before many more years go by for, if my observation serves me right, the Gaspé pinky, too, will soon be extinct for large power boats seem to be taking their place. The best time to write the history of any type of vessel is before that type has disappeared so here is an opportunity which should not be allowed to pass.

ERNEST S. DODGE

Peabody Museum of Salem



Journal of a Voyage from Boston to the Coast of California

BY RICHARD HENRY DANA, JR.

EDITED BY JAMES ALLISON

IN view of the fact that the Journal upon which Richard Henry Dana, Jr. based *Two Years Before the Mast* has never been published, an oversight which has resulted in some confusion among scholars, particularly with regard to Dana's use of longitude and latitude in the text of the Journal itself,¹ I am editing it at the present time.

The original Journal is owned by the Massachusetts Historical Society, and by courtesy of Mr. Stewart Mitchell, Director, and Mr. Stephen T. Riley, Librarian, of the Society, the entire Journal is being made available to scholars and general readers interested in the new light which it may shed upon the novel.

In editing the Journal I have tried to reduce annotation to a minimum. Thus I have not pointed out that when Dana merely jots down the word 'Albatrosses' he is laying the groundwork for one of the most lyrical passages in the novel. Likewise, though I have noted that the Journal ends with the word 'Chro-chre-nometer,' I have not bothered to point out its humorous appearance in *Two Years*. Anyone who does not know the book will not, I am sure, read this Journal; and anyone who knows the book will have no difficulty in seeing how each word, every annotation, in the Journal, set off a train of association in Dana's mind which resulted in *Two Years Before the Mast*.

Annotations made by Dana on the verso of the title-page of the Journal: (possibly his own notes on the dimensions of *Alert*).

Length fore and aft	109 ft.	Main yard -	51 ft.
Lower masts - Main	54 ft.	Fore yard -	50 ft.
- fore	52 ft.	Cross Jack Yard	40 ft.
- Mizzen	48 ft.	Main Topsail Yard	40 ft.
Topmasts - Main	45 ft.	Fore Topsail Yard	39 ft.
- fore	43½ ft.	Mizzen Topsail Yard	29 ft.
- Mizzen	40 ft.	Beam	27 ft.

¹ Sherman Kent, 'Russian Christmas Before the Mast,' *American Literature*, XIII (1942), 395; James D. Hart, 'A Note on Sherman Kent's "Russian Christmas Before the Mast,"' *American Liter-*

Journal of a Voyage from Boston to the Coast of California

Thursday, Aug. 14th, 1834. Went on board brig 'Pilgrim,'² lying at Central Wharf. Towards night, being nearly ready for sea, the vessel hauled into the stream, & came to anchor.

Friday, Aug. 15th. Took on board gunpowder—had a fine breeze but did not set sail.

Saturday, Aug. 16th. At 10 A. M. Wind E. N. E. took a pilot on board, weighed anchor, & set sail; but the wind coming round dead East, came to anchor in the Roads. At 10 P. M. a light breeze springing up from the Southward and S. Westward, got under weigh, & stood out to sea.

Sunday, Aug. 17th. Here out of sight of the land. At night all hands called aft, & the sea watch set. The Crew consists of Fr. A. Thompson,³ Captain; Andrew B. Amazeen,⁴ Chief Mate; Geo. Foster,⁵ 2nd Mate; 5 able seamen,⁶ 4 green hands,⁷ Steward,⁸ Cook,⁹ & Carpenter.¹⁰ This vessel is about two hundred tons burthen, & owned by Messrs. Bryant, Sturgis, & Co., Boston.

ature, XIV (1942), 294-298. Mr. Hart has answered Mr. Kent effectively, but he has neglected to point out the fact that longitude and latitude are given in the text of the Journal as well as on the last page.

² The brig *Pilgrim* 'was built in the year 1825 at Medford, Mass., as appears by certificate of Sprague and James, master carpenters; under whose direction she was built' . . . 'has 2 decks and 2 masts' . . . 'her length is 86 feet and 6 inches, her breadth 21 feet 7½ inches, her depth 10 feet 9¾ inches' . . . 'and she measures one hundred and eighty tons and 56/95ths' . . . 'has a figure head and a square stern; and no galleries.' From Official Registry, 5 May 1825.

³ Francis A. Thompson: born in Maine; age 30.

⁴ Spelled Amezene in MS. He was a resident of Portsmouth; age 28; 5 ft. 8½ inches; light complexioned with brown hair.

⁵ Born in Scituate; resident of Scituate; age 23; 5 ft. 6½ inches tall; light complexioned with brown hair.

⁶ James Hall: born in Pittston; resident of Boston; age 21; 5 ft. 10 inches tall; light complexioned with brown hair. Samuel Sparks: born in Westmorland Co., resident of Boston; age 25; 5 ft. 9½ inches tall; fallow complexioned with dark brown hair. John Linden: born in Sweden; resident of Sweden; subject of Sweden; age 27; 5 ft. 7 inches tall; light complexioned with brown hair. William Brown: born in Baltimore; resident of Boston; age 24; 5 ft. 6½ inches tall; light complexioned; light hair. George Bellamer; born in Boston; resident of Boston; age 21; 5 ft. 4 inches tall; light complexioned; brown hair.

⁷ Henry Mellus; born in Dorchester; resident of Dorchester; age 18; 5 ft. 7¾ inches; dark complexioned; dark hair. Richard Henry Dana; born in Cambridge; resident of Cambridge; age 19; 5 ft. 5 inches tall; light complexioned; dark hair. Benjamin G. Stimson; born in Dedham; resident of Dedham; age 18; 5 ft. 10 inches tall; light complexioned; light hair. Samuel Hooper 2nd; born in Marblehead; resident of Marblehead; age 12; 4 ft. 2½ inches tall; light complexioned; light hair.

⁸ William Warren; born in Great Britain; resident of Boston; citizen of Great Britain; age 28; height, 5 ft. 6 inches; complexion, light; hair, dark.

⁹ Thomas Curtis; born in Weston; resident of Boston; age 40; height, 5 ft. 7½ inches; complexion, black; hair, woolly.

¹⁰ John Holtz; born in Germany; resident of Germany; citizen of Germany; age 37; height, 5 ft. 11; complexion, light; hair, dark.

Tuesday, Aug. 19th. Came into the Gulf Stream. In the evening—wind, rain, and a heavy sea. Double reefed the topsails.

Wednesday, Aug. 20th. Fine weather returned with the morning. About two o'clock P. M. two sails hove in sight; they passed to leeward, out of reach of hail. They were the Ship 'Helen Mar' of New York, & the Brig 'Mermaid' of Boston; both homeward bound.

Thursday, Aug. 21st. Spoke the French Ship 'La Carolina' from Havre to N. York. Desired her to report Brig 'Pilgrim' from Boston to the Coast of California.

Friday, Sept. 5th. Spoke an English Brig, 49 days from Buenos Ayres for Liverpool. In the afternoon a small Brazilian Herm.¹¹ Brig passed astern; probably bound to Portugal.

Sunday, Sept. 7th. Fell in with the trade winds.

Monday, Sept. 22nd. At 7 A. M. a small Herm Brig, filled with men, stood down for us. Not liking her appearance, made sail, & ran before the wind. The vessel continued in chase all day; at night was nearly out of sight. It coming on dark, we changed our course, covered the binnacle, & cabin lights, & at daylight were out of sight.

Wednesday, Oct. 1st. Crossed the Equator at longitude $24^{\circ} 24' W$.

Friday, Oct. 3rd. Broke the 2nd Mate for negligence & other misconduct. James Hall, one of the crew, made 2nd Mate, with consent of all hands.

Sunday, Oct. 5th. Saw land at daybreak. At 12 M. off Pernambuco; could distinguish the tower of Olinda, Church, Houses, &c. At sunset, land out of sight.

Tuesday, Nov. 4th. Saw the Falkland Islands. Left them on the larboard Quarter. At Sunset saw land from mast-head on the starboard bow.

Wednesday, Nov. 5th. Off Cape Horn. At night violent storm. Wind S. W.

Thursday 6th. Stormy.

Friday. Calm. At night a strong gale.

Saturday. Do. Ditto.

Monday 10th. High sea & violent wind.

Tuesday 11th. Rain, Hail, & Snow, with high winds.

Wednesday 12th. Ditto.

¹¹ Hermaphrodite brig: a two-masted vessel having its foremast rigged square and its mainmast fore-and-aft rigged.

Friday 14th. Morning Passed the Cape with Fine weather. At 2 P. M. Spoke the whale-ship 'New England,' 120 days from New York. (Albatrosses)

Saturday 15th. The 'New England' being still in sight, backed our main-top-sail, and the Captain (Terry) came on board & spent the day.

Monday, Nov. 17th. At 7 A. M. Geo. Bellamer,¹² one of the crew, fell over-board from the main rigging & was lost. Lowered away the whale-boat, & manned her; but the man being heavily dressed, & ignorant of swimming, was never seen more.

Tuesday, Nov. 25th. At day-break saw Juan Fernandez. Came to anchor in the harbour, same night. Spoke, going in, a Chilian brig of war, bound to Valparaiso.

Wednesday, Nov. 26th. Went ashore, & brought off six casks of water. The Governor of the Island, the commander of the soldiers, & the priest, came on board to dinner. The same afternoon got under weigh; saw the whale-ship 'Cortes' of New Bedford, lying off and on the Island.

Friday, December 19th. Crossed the Equator.

Tuesday, Jan. 13th, 1835. Made the land of Point Conception, Lat., 34° 32' N.; Long., 120° 6' W.

Wednesday, Jan. 14th. Arrived at Santa Barbara. One hundred and fifty days from Boston.

Found at Santa Barbara, the Brig 'Ayacucho,' Capt. Wilson, under English colours.

Thursday, Jan. 15th. Arrived the Herm. Brig 'Loriotte,' Capt. Nye, from the Sandwich Islands; & the Genoese Ship 'La Rosa' from St. Diego, bound up to windward. Same night got under weigh in a gale from the South East.

Sunday, Jan 18th. Returned to our anchorage.

From Santa Barbara sailed to Monterey. There, entered our cargo at the Custom-House & commenced trading. Lay at Monterey 12 days; then returned to Santa Barbara. Thence to St. Pedro. Lying at St. Pedro, the Mexican Herm. Brig 'Fazio.'

Sailed from St. Pedro, & arrived at St. Diego, *March 14th.* Found there the Ship 'Lagoda,'¹³ Capt. Bradshaw, of Boston, & the Brig 'Ayacucho,' load-

¹² Spelled Ballmer in the MS.

¹³ Built at Scituate, 1826; rig changed to bark in 1860. The most famous exhibit in the Bourne Whaling Museum, connected with the museum of the Old Dartmouth Historical Society, is the model of the whaling bark *Lagoda*. The length of the model from figurehead to stern is 59 ft.—from

ing for home. The Ship 'California,' Capt. Arthur, belonging to Messrs. Bryant, Sturgis, & Co., had sailed thence for Boston during the last of February.

Discharged our hides, salt &c., & left a gang on shore at the Hide House. Geo. Foster, sometime 2nd Mate, here ran away, & went home in the 'Lagoda,' which sailed for Boston early in April. The 'Ayacucho,' Capt. Wilson, sailed for Callao, *Sunday, March 22nd*.

Friday, March 27th. Sailed from St. Diego.

Wednesday, April 1st. Arrived at St. Pedro. Found there the Herm. Brig. 'Loriotte,' bound to St. Blas. From St. Pedro, sailed to Santa Barbara.¹⁴ Found there the Genoese Ship 'La Rosa,' bound to St. Diego, & the Brig 'Catalina' just arrived from Valparaiso & Callao. From Santa Barbara, sailed to St. Pedro; thence to St. Juan's; thence to St. Diego. Arrived *Friday, May 8th*. Discharged hides. Was left ashore to join the gang at the Hide House.¹⁵

Tuesday, May 12th. Arrived the Ship 'Rosa' & the Brig 'Catalina,' & set sail, after discharging hides, for the Windward.

Thursday, May 14th. Sailed the Brig 'Pilgrim' for the windward. Same day, arrived the Mexican Herm. Brig 'Fazio,' to take in Hides & tallow for Callao.

Wednesday, July 8th. Arrived the Brig 'Pilgrim' from the Windward. Reported at Santa Barbara, the Ship 'Alert'¹⁶ from Boston, owned by Messrs. Bryant, Sturgis, & Co.

Capt. Thompson of the 'Pilgrim,' transferred to the 'Alert'; and Capt. Faucon of the 'Alert,' to the 'Pilgrim.'

Saturday, July 11th. The 'Pilgrim' set sail for the Windward.

Saturday, July 18th. Sailed the 'Fazio' for St. Blas, Callao, &c.

Tuesday, Aug. 25th. Arrived Ship 'Alert' from the windward, with seven thousand hides; also horns, & tallow. Discharged cargo, & took in ballast.

Saturday, Aug. 29th. Arrived Brig 'Catalina' from the windward.

Monday, Sept. 7th. Went on board the ship 'Alert.'

flying jibboom to the end of the spanker boom 89 feet. Her mainmast is 50 ft. high. The cost of the museum and model was about \$150,000. In a sense, then, it is still possible to go aboard the *Lagoda*, the ship mentioned here; that is, if one is visiting New Bedford, Mass.

¹⁴ At this point in the MS. Dana has pencilled in the word 'kelp.'

¹⁵ Here Dana has pencilled in 'superstit. Cook. Sailmaker.'

¹⁶ The *Alert*, built in Boston in 1828, had two decks and three masts; her length was 113 feet 4 inches, her breadth 28 feet; her depth fourteen feet; she measured 398 18/95 tons.

Tuesday, Sept. 8th. Sailed from St. Diego. Friday 11th, arrived at St. Pedro; found there the Brig 'Pilgrim.' Sailed from St. Pedro in company with the Brig 'Catalina.' Arrived at Santa Barbara Sun. Oct. 4th. Sailed Sun. 11th; arrived at St. Diego Oct. 15th. Discharged hides, &c. & sailed Sun. 18th. Arrived at St. Juan's on the 20th & sailed on the 21st. Arrived at St. Pedro Thursday, Oct. 22nd.¹⁷

Sailed from St. Pedro Sunday, Nov. 1st. Arrived at Santa Barbara on the 5th. Found there the Brig 'Ayacucho' from Callao¹⁸ & the 'Avon,' Capt. Hinckley, from Oahu. Nov. 10th arrived the Whale Ship 'Wilmington & Liverpool Packet' of New Bedford, from the Coast of Japan. 1900 bblls. of oil. On the 12th slipped our cables for a South East gale; returned to our anchorage the next day. Saturday the 14th Nov. set sail for Monterey. Tuesday evening took a gale of wind from the N. W. Split our three topsails, foresail, jib, & foretopmast staysail. Continued under reefed topsails for eight days. Arrived at St. Francisco on Friday, the 4th of December. Lying at St. Francisco, a Russian Brig from the N. W. coast of America. Sailed on Sunday the 27th. Tuesday 29th arrived at Monterey. Spoke, going in, the Brig 'Diana' of the Sandwich Islands, from the N. W. coast, bound in.

Sailed¹⁹ from Monterey Wednesday 6th for Santa Barbara. (Found at Monterey the Russian Company's Barque 'Sitka' from the N. W. coast. Sailed on Friday the 1st for St. Blas, &c.) Sailed in company with us the Brig 'Diana' for Oahu. Spoke off Point Conception the Brig 'Convoy' of the Sandwich Islands; hunting for otter. Arrived at Santa Barbara²⁰ Sun. Jan. 10th. Wedn. 13th, slipped our cable & went to sea for a South East gale. Returned to our anchorage the following day. Sailed for St. Pedro Feb. 1st. Arrived there on the following day. Found there the Brigs 'Ayacucho' and 'Pilgrim.' Took from the latter, three thousand hides. Thursday the 4th, got under weigh. Arrived at St. Diego on the 6th. The Italian ship 'La Rosa' & the Brig 'Catalina' had sailed thence, for Callao. Discharged hides & sailed Wed. 10th for San Pedro; arrived at San Pedro on the 14th. Passed on the Brig 'Ayacucho.' On the 23rd received news of the arrival of the Ship 'California,' Arthur, from Boston. At Santa Barbara on the 20th. Received letters from home. Thursday, 25th February Set sail for Santa Barbara. (While lying at St. Pedro, slipped our cable on Sat. 19th for a gale of wind at the N. E. On Monday morning, returned to our anchorage.) Arrived at Santa Barbara Sunday the 28th. On the²¹ following Saturday set sail for the

¹⁷ Just above this entry Dana has pencilled 'funeral, game cocks, George.'

¹⁸ Here Dana has written, this time in ink, 'War with France.'

¹⁹ In ink Dana has written the word 'fight.'

²⁰ In ink at this point Dana has written the word 'bedding.'

²¹ Here Dana has pencilled the word 'papers.'

leeward; having taken in our water, & left one of the crew, Geo. Marsh (who shipped on the coast) for 2nd Officer of the 'Ayacucho.' Arrived at St. Pedro, on Monday, the 7th of March & left on the following Wednesday. Thursday, March 10th, St. Diego. Landed²² our hides and Tallow, unbent the sails, housed the top-gallant-masts, & commenced discharging ballast.

April 15th arrived the Brig 'Pilgrim' for²³ the windward. Sunday the 24th arrived the Ship 'California,' Arthur, from the windward. Sailed on the 29th. Sailed the Brig 'Pilgrim' for San Pedro. 'Reefer,' Sun., May the 8th, sailed from St. Diego homeward bound. Same day, sailed the Ship 'California' for the windward. Stood out to sea with a fine breeze from the N. W. which continued until we caught the N. E. trades, which we fell²⁴ in with, in Lat. 29° N. These trade winds continued to blow fresh until we were in Lat. 10° N. when we had more variable winds, with some rain. As we approached the line, the winds hauled to the Southward & Eastward. Crossed the equatorial line on the afternoon of Saturday, the 28th of May, in Long. 110° W., being twenty days out from St. Diego. Immediately²⁵ after crossing the line we had the trade winds steadily from the E. S. E. & on Sunday the 5th of June were in Lat. 29° 30' S. Supposed Long. 119° W.

Were in the Lat. of Cape Horn during the last week in June, and commenced running to the Eastward. On Saturday, July 2nd, at 1 o'clock P. M. fell in with three large ice islands. On July 4th saw 34 islands. Being unable to proceed any farther, on account of the ice, wore Ship & stood to the Northward. Being free from ice, attempted again the passage of the Cape; but were again driven back by the ice. The Capt. then determined to run for the Straits of Magellan. Having reached the Lat. 53° S. & having continual easterly winds & thick, foggy weather, & no prospect of finding the mouth of the Straits; we again Stood for Cape Horn. This time we saw but little ice, but had continual head winds with snow & rain. On Friday the 22nd of July made the Island of Staten Land, & on Saturday the 23rd Stood to the Northward with a strong wind from the S. W. This breeze continued with little variation, & on Sunday, July 31st, we were in Lat. 36° 37' S., Long. 40° W. Sunday, Aug. 7th, Spoke the English barque 'Mary & Catharine' from Bahia, bound to Calcutta, Lat. 25° 59' N., Long. 27° W.

²² In ink Dana has written the name 'Hope.' John H. Everett, who served aboard the *Pilgrim* as clerk, and who annotated a copy of *Two Years Before the Mast*, maintained that Dana was wrong in calling the character by this name, saying that his name was simply 'Hop.'—James D. Hart, 'An Eyewitness of Eight Months Before the Mast,' *The Colophon* (New York, 1950), p. 131.

²³ In ink just here are the words 'fresh provisions.'

²⁴ Here Dana has written 'Mr. Nutall' in ink.

²⁵ In ink Dana has here written 'sounds at sea.'

On Monday 8th passed a large Ship under English colours, standing S. by E. Friday, Aug. 12th, at daylight made the Island of Trinidad situated in Lat. 20° 28' S., Long. 29° 8' W. At 12 M. it bore N. W. ½ N. Dist. 27 m. Sunday the 14th at noon: Lat. 16° 30' S. Thursday 18th at 3 P. M. made the island of Fernando Noronha, Lat. 3° 55' S., Long. 32° 35' W. Between 12 o'clk on Friday night, & 10 o'clk on Saturday morning crossed the Equator in Long. 33° W. Having been 29 days from Staten Land, a distance of upwards of 4000 miles. Sunday,²⁶ Aug. 28th, N. E. trades. Lat. 12° 58', Long. [38° 00'].²⁷ Sunday, Sept. 4th: Lat. 22° 01' N., Long.²⁸ 52° 01' 15' W. Sunday, Sept. 11th, Lat. 30° N. Monday²⁹ 12th, Lat. 31° N., Long. 65° W. Spoke brig 'Solon' of Plymouth, from N. York for Curacoa. Saturday³⁰ 17th at 10 o'clk P. M. got Soundings in 60 fathoms water, black mud bottom. Supposed Block Island Channel. Kept under easy sail throughout Saturday night. Sunday 18th—a dead calm & heavy fog throughout the day; toward evening a light breeze—Kept away for Nantucket South Shoals. At sun-down on Monday the 19th were off Chatham Lights. Were in Boston Bay on Tuesday morning at day-light. At eight A. M. took on board a pilot. Throughout the day light & baffling winds. At 7½ P. M. came to anchor just below the Castle.³¹

On Wednesday, the 21st day of September, 1836. The Ship 'Alert' was made fast to the wharf & the crew discharged.³²

Longitude and Latitude of voyage

Sailed Sunday May 8 th	
Tuesday May 10 th	Lat. 26° 58' N. Long. 118° 08' W.
Sunday 15 th	— 14° 56' N. — 116° 14' W.
Wednesday 18 th	— 9° 54' N. — 113° 17' W.
Sunday 22 nd	— 5° 14' N. — 106° 45' W.
— 29 th	— 1° 50' S. — 114° 55' W.
— 5 th June	19° 29' S. — 118° 01' W.
— 12 th	26° 04' S. — 116° 31' W.
Friday 17 th	30° 19' S. — 116° 44' W.
Sunday 19 th	34° 15' S. — 116° 38' W.

²⁶ 'top gall. yard' appears here in pencil.

²⁷ Omitted in MS. text. Supplied from the appended list of the ship's positions.

²⁸ Pencilled here is the word 'thunderstorm.'

²⁹ Pencilled in: the word 'scurvy.'

³⁰ In pencil Dana has inserted the word 'gulfstream.'

³¹ Castle Island: 'Frowning over the channel, 2½ miles from Boston, and 900 yards from South Boston, rise the batteries of Castle Island.' *King's Handbook of Boston Harbor* (2nd ed., Cambridge, Mass., 1883), p. 129. For further details see Edward R. Snow, *The Islands of Boston Harbor, Their History and Romance 1626-1935* (Andover, Mass., 1935), pp. 109-151.

³² At the very end of the MS. Dana wrote in pencil 'Chro-chre-nometer.'

BOSTON TO THE COAST OF CALIFORNIA

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----- 26 th		47° 50' S. ----- 113° 49' W.	
----- 3 rd	July	55° 12' S. ----- 89° 5' W.	
Monday 7 th		54° 27' S. ----- 85° 21' W.	
Sunday 10 th		54° 10' S. ----- 79° 07' W.	
----- 17 th		55° 52' S. ----- 70° 16' W.	
----- 24 th		50° 27' S. ----- 62° 13' W.	
----- 31 st		36° 41' S. ----- 38° 08' W.	10:30
----- 7 th	Aug.	25° 57' S. ----- 27° 36' W.	
----- 14 th		16° 33' S. ----- 29° 21' W.	
Sat. 20 th		Crossed the Line Long 35 W. 9:00	
Sunday 21 st		3° 29' N. ----- 35° 15' W.	
----- 28 th		12° 47' N. ----- 38° 00' W.	
----- 4 th	Sept.	22° 01' N. ----- 51° 29' W.	
----- 11 th		30° 04' N. ----- 63° 23' W.	
----- 18 th		41° 00' N. ----- 71° 30' W.	

James Allison was born in Rochester, Indiana, but is one of those mid-westerners who returned to the sea. After receiving an M.A. degree at Harvard in 1943 he served three years in the Navy, two of which were spent in the Aleutian Islands. He returned to Harvard where he received his doctor's degree in 1948. At present he is Assistant Professor of English at Union College, Schenectady.



Primitive Watercraft of Arabia¹

RICHARD LEBARON BOWEN, JR.

I

THERE is no doubt that man developed the first watercraft on quiet rivers, lakes, and marshes. As might be expected, the earliest known forms of boats can be traced to the Nile River and to the Tigris and Euphrates Rivers. Arabia is bounded by the Red Sea on the west, the Arabian Sea on the south, and the Persian Gulf on the east. Not one true river flows out of this desolate waste to the sea. Most of the coast is barren and sterile; seaports and small fishing villages are scattered at wide intervals along the coast. Only for short distances on the Arabian coast are trees seen in any number and then usually in irrigated oases. One would thus expect the first Arabian watercraft to be borrowed from other areas where they had more opportunity to evolve naturally; the craft recognized today as 'indigenous' to the Arabian coasts have evolved from the earliest borrowed models and did not originate in Arabia.

The sum total of the evidence in the Indian Ocean shows that fisherfolk cling most tenaciously to primitive forms of watercraft. Mariners, on the other hand, usually sail in craft that have been strongly influenced by foreign elements. Therefore, as a general rule we may state that the indigenous watercraft of any area are most likely to be found among fishermen. The reason is evident: fishermen seldom leave their cultural area, though the mariner is always in contact with foreign elements which are bound to influence the design and build of his craft. By the same logic, it may be assumed that the more primitive forms of watercraft will be

¹ The writer is indebted to Mr. Wendell Phillips, President of the American Foundation for the Study of Man, for making most of this work possible, since much of the material was gathered firsthand in South Arabia in 1950 while the author was a member of the Foundation's Arabian Expedition. While the sewn boat and the dugout *huri* have been mentioned casually by many Arabian explorers and travellers, no description of the craft or their square sails has ever been given before. The writer is also grateful to Prof. W. F. Albright, vice president of the Foundation, for assistance in the work, and thanks are also extended to Prof. P. K. Hitti for much valuable aid. The author is also very grateful to Colonel and Mrs. H. R. P. Dickson of Kuwait for collaborating on the reed canoe of the Persian Gulf.

found in use by the fishermen. The mariner does not necessarily know the techniques of the fisherman, although the fisherman is by nature a sailor. This further tends to spread culture among the mariners on one hand and preserve that of the fisherfolk on the other.

Sometimes in certain specific types of fishing there can be detected a foreign influence in the type of watercraft used which dates back to the introduction of both the craft and the fishing technique. Such is excellently illustrated by the flying fish industry of South India where fishing is done exclusively by natives using a shaped catamaran with a lateen sail; both this catamaran and its sail can be shown to be of Indonesian origin introduced at an early date.² Since most of these foreign craft have nothing outstanding to recommend them as watercraft, it is only logical to suppose that the users of these craft came with them. One cannot logically hypothesize that these primitive forms of watercraft have been borrowed. A very small group of colonists can introduce methods and techniques that later will be adopted by the main bulk of the population; centuries later the colonists have been absorbed, and the only evidence of them is the marine culture which they introduced.

Most investigators have not been fully conscious of these principles, although some have at times noticed that fishing groups often differ from the rest of the population: Hornell,³ in discussing the Bombay coast of India, states that 'The races furnishing the fisher and the sailor classes are equally varied, both in origin, language, and religion.'

II

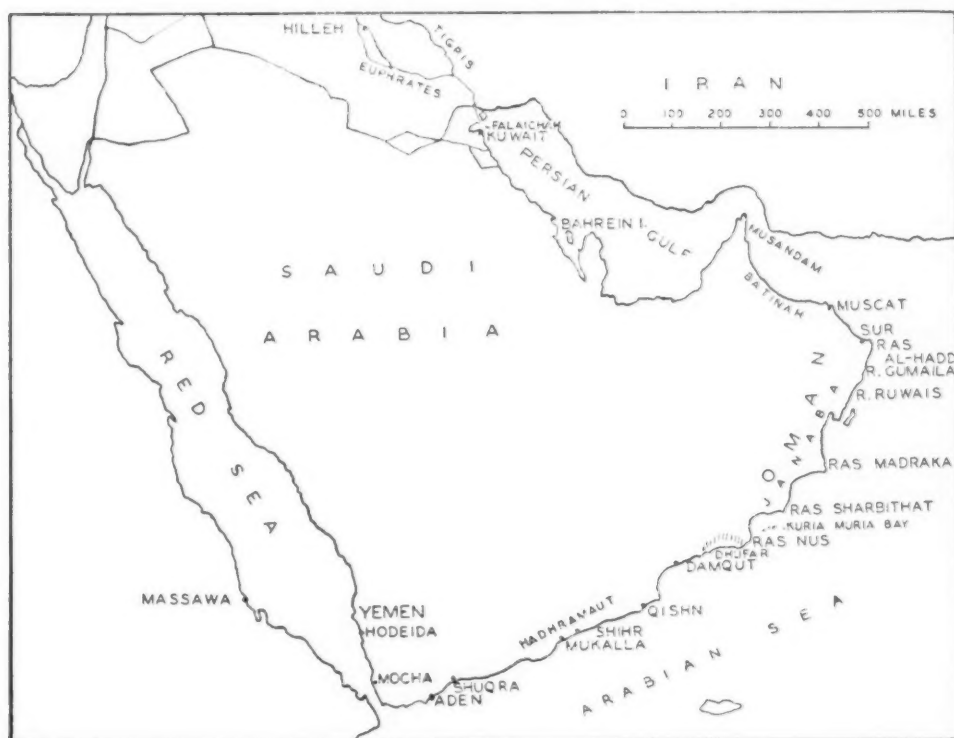
Between Hadhramaut and Ras al-Hadd in Oman the entire seacoast is barren and sparsely settled. From Mukalla to Sur there are no ports of any consequence; small fishing villages are scattered along the whole coast. Here is found the ancient frankincense-bearing Dhufar plain; the whole libaniferous area does not cover much more than fifty miles, and is an extremely abnormal feature of the coast—and of Arabia, for that matter. The Dhufar coast still exports small amounts of frankincense, myrrh, and gum arabic. Since the whole coast has virtually no contact with the outside world, many ancient customs survive.

The people living in the towns along this coast possess few boats, and these are usually fishing boats. Along one long strip of this coast the fish-

² The proof of this has never appeared in print before and will be presented sometime in the future in the *AMERICAN NEPTUNE*.

³ J. Hornell, 'Ethnological Significance of Indian Boat Designs,' *Memoirs Asiatic Society of Bengal*, VII (1920), 144.

ermen do not even have boats; they reach the scene of their fishing activities by swimming on inflated sheepskins. Here Janaba fishermen, armed with nothing more than an inflated skin and a net, fish for sharks and are extremely successful, catching great numbers of them. They apparently catch the sharks mainly for the fins and tails, which are sent to Muscat by passing vessels, for final shipment to China. However, none of the shark is wasted, for the red shark's meat is eaten fresh on the coast or salted for export and shipment into the interior.



Wellsted⁴ stated that the fishermen of the Beni Geneba pursued sharks on 'a single inflated skin, or two of these, having a flat board across them.' They also cast small hand nets or played a hook and line from these. Wellsted locates the Beni Geneba along the coast from Cape Isolette (Ras Madraka) to Beni Bu Ali (about Ras Gumaila). Haines⁵ was in the area

⁴ J. R. Wellsted, *Travels in Arabia* (London: J. Murray, 1938), I, 79.

⁵ S. B. Haines, 'Memoir of the South and East Coasts of Arabia,' *Geographical Journal*, XV (1845), 141.

at the same time and reported that 'this desert line of coast [extending from Ras Sharbithat to Ras Madraka] is scantily inhabited by a few miserable fishermen of the Jenabi tribe, who . . . fish seated on sheep skins.'

About the same time, Osgood⁶ related that the Jenabi tribe fished for sharks from inflated skins, but the wording of Osgood's description is so similar to Haines' that Osgood probably never actually saw these floats. Carter⁷ has also given an account of these floats. He relates that the swimming float was used from Ras Rues (Ruweis), where he first saw it, to the village of Hasik in Curia Muria Bay. He states that the Whebah had few boats and because of poverty were forced to use these inflated skins; at Shebalah the Whebah used these floats in fishing for sardines with circular casting nets.

Half a century later, Bent⁸ sailed by this area at night and related that the Curia Muria Islands were 'inhabited by the Jenefa tribe, who pursue sharks, swimming on inflated skins.' However, Hulton⁹ and Haines¹⁰ had previously given very complete accounts of the Curia Muria Islands and indicated that the few dozen inhabitants located on the largest island had absolutely no boats, rafts, or other watercraft, and lived solely on fish caught in basket traps and by hook and line. Haines further related that the inhabitants had no idea from what part of the coast they originally came, or whether they belonged to the Janaba or the Qarra tribes. Thus Bent probably misunderstood his informant who must have been referring to the mainland.

In recent times, Bertram Thomas¹¹ visited part of this coast and indicated that shark fishing from inflated sheepskins was carried on by the Bautahara fishermen living along the coast from Ras Nus to Ras Sharbithat. The Bautahara are subject to the Janaba (Jenabi of Haines and Osgood; Jenefa of Bent; Beni Geneba of Wellsted).

The evidence presented above seems to indicate that these swimming floats were in common use along the long stretch of coast from Ras Nus to Ras Ruweis a hundred years ago but that their use may have been considerably restricted in recent times. However, it should be pointed out that Thomas did not travel along the coast like Wellsted, Haines, and

⁶ J. B. F. Osgood, *Notes of Travel* (Salem: 1854), p. 118.

⁷ H. J. Carter, 'Geography of the Southwest Coast of Arabia,' *Journal Bombay Branch Royal Asiatic Society*, III (1851), 236-237.

⁸ T. Bent, *Southern Arabia* (London: Smith Elder and Co., 1900), p. 230.

⁹ J. G. Hulton, 'An Account of the Curia Muria Islands,' *Geographical Journal*, XI (1841), 159-161.

¹⁰ S. B. Haines, *op. cit.*, 135-136.

¹¹ B. Thomas, 'Among Some Unknown Tribes of South Arabia,' *Journal Royal Anthropological Institute*, LIX (1929), 100; *Alarms and Excursions in Arabia* (London: Allen & Unwin, 1931), p. 282.

Carter, who travelled in sailing ships and put into many towns; except for the area from which Thomas reported the swimming floats, he travelled inland by camel. Thus it seems that swimming floats may still exist along much of the coast from Ras Nus to Ras Ruwais that they did a century ago. Hornell¹² is incorrect in stating that swimming floats are found east of Aden and in the Hadhramaut; he has misread one of the above mentioned references. These floats have never been reported west of Ras Nus.

Thomas related that the fishermen swam out on the sheepskin floats with a strong, wide-meshed net, which was cast and anchored. On the following morning they swam out to examine the net floats which told whether they had a catch. If there was a catch that was too large for one man to handle, several fishermen, armed only with their floats, hauled the shark in to shore.

Thomas stated that the fishermen were too poor to own boats. However, it seems that there is a little more than that to consider. Haines related that

They go out to fish seated on inflated skins, and it is surprising to see how well and safely they push off through a heavy surf, such as no boat could live in; and from my experience on this coast, I can with confidence state that they are seldom without such a surf as would make the landing in a ship's boat, a hazardous experiment.¹³

Thus it would seem that the custom of fishing from inflated skin floats has persisted in this area because of the poverty and because of the heavy surf that apparently exists at virtually all times, making the use of even the strong, flexible, sewn boats impractical.

Swimming floats and float-supported rafts are of ancient origin; the Assyrians were using them regularly in the ninth century B.C. The *Periplus*¹⁴ relates that frankincense was transported along the South Arabian coast on 'rafts held up by inflated skins after the manner of the country, and in boats.' The statement that the rafts held up by inflated skins were 'after the manner of the country' might seem to imply that this type of watercraft was indigenous to the South Arabian coast and that boats were not. The *Periplus*¹⁵ also mentions rafts in use along the East African coast of the Gulf of Aden but does not say whether they were supported by in-

¹² J. Hornell, *Water Transport* (Cambridge: University Press, 1946), pp. 13-14, 31.

¹³ Haines, op. cit., 141.

¹⁴ W. H. Schoff, *The Periplus of the Erythraean Sea* (New York: Longmans, Green, and Co., 1912), p. 32.

¹⁵ Ibid., p. 25.

flated skins. Pliny¹⁶ relates that some islands off the Ethiopian coast were inhabited by an Arabian tribe 'called Ascitae because they make rafts of timber placed on a pair of inflated oxhides and practiced piracy, using poisoned arrows.' Ascitae is undoubtedly from the Greek *askos*, 'a wine-skin.' Today the float-supported raft is extinct on the South Arabian coast, but swimming floats still persist on a long, wave-beaten strip of the barren coast.

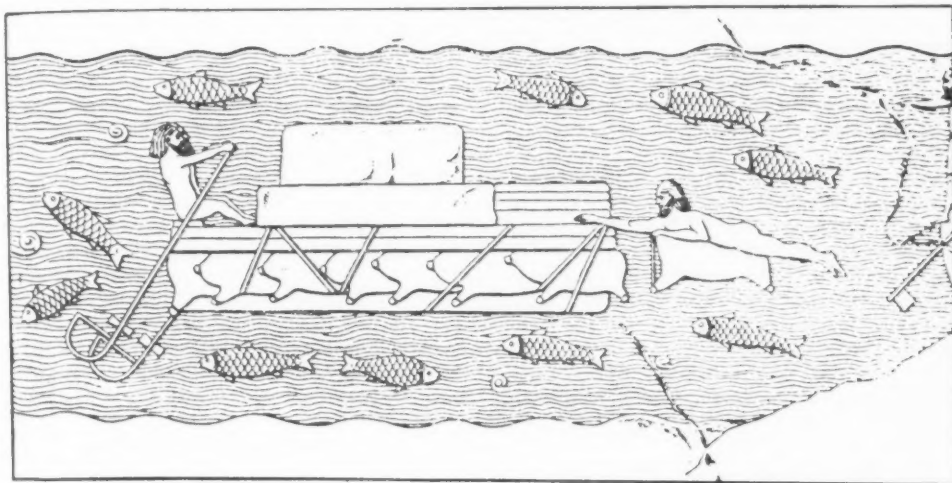


Fig. 1. Ninth century B.C. Assyrian sculpture showing a float-supported raft and a swimming float. Both are still found on the Tigris and Euphrates Rivers, while the swimming float is found in use on the coast of South Arabia. (After Hornell, *Water Transport*.)

It seems that the use of swimming floats and float-supported rafts may have come from some cultural association with Mesopotamia, since numerous Assyrian bas reliefs (Fig. 1) show examples of skin-supported rafts, as well as swimming floats. Even today swimming floats and float-supported rafts (*keleks*) are still used on the Tigris and the Euphrates Rivers. However, the fact that the use of float-supported rafts was so widespread in the first century A.D. may indicate that this form of watercraft reached the southern shores of Arabia by the simple process of diffusion. One might say that this does not seem possible, so awkward must have been the craft in the sea, and there certainly were examples of plank-built boats at the time. However, if there was no suitable timber for boat-build-

¹⁶ Pliny, *Natural History*, VI, 34, Translation of H. Rackham (Cambridge: Harvard University Press, 1942), II.

ing, inflated animal skins supporting palm logs would certainly be better than nothing.

In Babylonian history frequent reference is made to sea voyages to Dilmun, Magam, and Malukkah in the third millennium B.C. Bahrein Island has been identified as Dilmun¹⁷ and most scholars feel that Oman is the province of ancient Magam. About the location of Malukkah there is little or no agreement among the scholars; the only agreement is that it was farther away from Babylon than Magam. The ancient Assyrians used swimming floats and rafts supported by inflated skins; it seems logical to suppose that they were used in Babylonian times also.

It is this writer's opinion that ancient Malukkah was located on the south coast of Arabia, very probably on the Dhufar coast, where today both frankincense and myrrh grow wild. If Malukkah is equivalent to Dhufar, then the swimming floats and inflated skin rafts were undoubtedly introduced in the third millennium B.C. If this were true there was probably a colony, and there is a rare chance that archaeological excavation of some of the many ruined cities to be found on the Dhufar plain today might show early Babylonian contact with this area.

Frankfort¹⁸ has shown that art and boat designs in Predynastic Egypt were undoubtedly influenced by Mesopotamia. He suggests that perhaps this influence came by sea via the Persian Gulf, the Arabian Sea, and the Red Sea. However, I must agree with Hourani¹⁹ in doubting such voyages as early as the fourth millennium B.C., for such cultural influence could have come more easily overland via Syria. However, there is no doubt that by the middle of the third millennium B.C. the Babylonians did have organized seafaring.

III

Gone from Oman are the catamarans mentioned by many early European travellers. Palgrave²⁰ mentioned that 'log-canoes presenting the catamaran construction of the Malabar Coast' were found on the Musundam Peninsula in 1862. Shortly before this Osgood reported that catamarans were used by the Muscat fishermen:

¹⁷ P. B. Cornwall, 'On the Location of Dilmun,' *Bulletin of the American Schools of Oriental Research*, No. 103 (1946), 3-10.

¹⁸ H. Frankfort, *The Birth of Civilization in the Near East* (Bloomington: Indiana University Press, 1951), p. 111; 'The Origin of Monumental Architecture in Egypt,' *American Journal of Semitic Languages and Literatures*, LVIII (1941), 329-358.

¹⁹ G. F. Hourani, *Arab Seafaring* (Princeton: Princeton University Press, 1951), p. 7.

²⁰ W. G. Palgrave, *A Year's Journey Through Central and Eastern Arabia (1862-3)* (3rd ed., London: Macmillan and Co., 1866), II, 314.

Other [fishermen] depend on the frail catamaran constructed of two or three slender logs lashed together with a grass rope. Upon such a craft, not more than four or five feet long by two wide, its proprietor will go several miles to sea, propelling his float with a double bladed paddle plied dexterously on either side. When fishing, he sits with his feet dangling in the water, with a rush sack for the caught fish lashed to his back, and a spare line or two hanging from his neck. As his catamaran is sunk from sight by his weight and danced up and down by the waves, he has the appearance of a person treading water.²¹

These catamarans existed at Muscat into the present century, for Bent²² related that at Muscat he saw 'fishermen paddling themselves about on a plank or two tied together, or swimming astride of a single one.' Today the catamaran is apparently absent from the waters of Oman. These are still found in the Red Sea, for Moore²³ relates that he saw rafts of three and four logs used by the fishermen at Massawa. Moore²⁴ gives *ramasth* as the Arabic for 'raft.' Paris²⁵ relates that the catamaran was also found in Yemen equipped with a sail. It is unfortunate that more information is not available on this sailing catamaran, for it may have been of Indonesian origin.

It is possible that the log raft was originated independently in several separated locales, so simple is the idea and so universal is the distribution of rafts. However, in the case of the Oman catamarans, it may be reasonably assumed that the idea was imported, undoubtedly from India, so numerous are catamarans in India. The type of catamaran described by Osgood is similar to primitive ones described by Hornell²⁶ as occurring in South India.

IV

There is an interesting primitive craft found in Oman today; this is the *shashah* of the Batinah coast. Thomas²⁷ refers to the *shashah* as 'a frail wicker cradle-boat' drawn up on a Batinah beach among various craft and tackle. Pongelley had previously given an excellent description of the craft:

An extremely singular-looking boat is in use by the fishermen on [the Batinah] coast, in which they trust themselves in all weathers, and sometimes perform voy-

²¹ J. B. F. Osgood, *Notes of Travel* (Salem: 1854), p. 65.

²² T. Bent, *Southern Arabia* (London: Smith Elder and Co., 1900), p. 47.

²³ A. Moore, *Last Days of Mast and Sail* (Oxford: Clarendon Press, 1925), p. 138.

²⁴ *Ibid.*, p. 123.

²⁵ F. E. Paris, *Essai sur la Construction Navale des Peuples Extra-Europeens* (Paris: Bertrand, [1841]), p. 8.

²⁶ J. Hornell, *Water Transport* (Cambridge: University Press, 1946), p. 61.

²⁷ B. Thomas, *Alarms and Excursions in Arabia* (London: Allen & Unwin, 1931), p. 142.

ages of from fifty to a hundred miles. It is constructed entirely from the stripped branches of the date, which (subsequent to a month's immersion in sea-water) are sewn together in the form of a boat. They are sharp at either end, and have a double flat bottom: the upper is used as a kind of deck on which the fishermen seat themselves. Necessarily the sea percolates freely through all parts, but the extreme buoyancy of the branches readily supports a crew of two men, together with, at times, a considerable cargo of fish. These boats . . . are propelled by two paddles, assisted occasionally by a small sail.²⁸

Villiers reported a craft of similar construction from the head of the Persian Gulf:

We saw the tiny date-frond boats of the fishermen fishing off Ras el-Ardh near Falaichah . . . , the fishermen sitting more in the water than out of it, for their boats are bundles of water-logged reeds afloat, not watertight or meant to be.²⁹

Dickson³⁰ also mentioned a primitive boat made at Kuwait of date-palm stalks tied together with string. In an effort to get more descriptive information on this peculiar craft I wrote the Dicksons at Kuwait. Mrs. H. R. P. Dickson spent considerable time and energy in getting a description, photographs, and sketches of these craft; the following is Mrs. Dickson's account:

The *huwayriyah* or *warraga* (pl. *wargiyeh*) is constructed by Awazim fishermen, a section of the great Awazim tribe of N. E. Arabia, and is used solely by those of them who fish with a line off shore [Plate 17]. The Awazim who make and look after the palm-stake fish traps (*hadhur*) do not use this kind of boat at all, and have a small dugout (*huri*) for going out to the further traps at low water. This is much lighter and easy to handle than the *huwayriyah*.

The *huwayriyah* is made from selected date-palm boughs (*sa'af*). They are then cleaned of their leaves, becoming *jariid* (according to a town Arab whom I asked; the Awazim may have another name) and buried in the beach sand about high tide mark for forty days to dampen them and make them pliable.

The stalks are first tied together at the thick end in small bundles with rope and the two lots are fitted in together to form the bottom and second bottom (Fig. 2). To make the craft float, *karab* (butts of palm boughs which are yearly trimmed off from the palm tree trunk), are placed in between the two layers. The sides are built up last of all, when bamboo uprights and crosspieces are fitted in. All is tied by rope made by themselves from the beaten out date palm fruit stalk. They are about nine feet long.

A *huwayriyah* I saw being made was more than half complete. The boat sides are sewn together, as are also the bottom and the false bottom. A hole is bored in each *jariid*, made by a sharp pointed file, to enable it to be threaded on to the several ropes. Each rope has a wire 'needle' attached to the end to make for easier thread-

²⁸ W. M. Pengelley, 'Remarks on a Portion of the Coast between Muscat and Sahar,' *Trans. Bombay Geographical Society*, XVI (1862), 32.

²⁹ A. Villiers, *Sons of Sinbad* (New York: Charles Scribner's Sons, 1940), p. 343.

³⁰ H. R. P. Dickson, *Arab of the Desert* (London: Allen & Unwin, 1949), p. 483.

ing. Three lines of rope seem to make up one side. An old damaged boat was broken up and the *karab* were used again to put into the bottom of the new boat (under the false bottom). Two men completed it in four days.

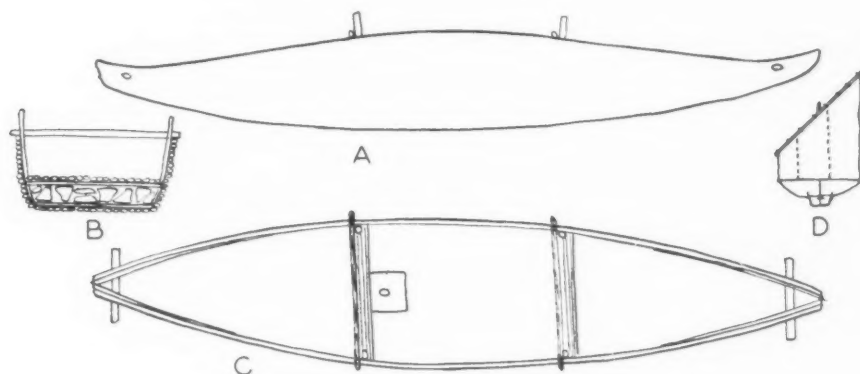


Fig. 2. The reed canoe of Kuwait. A, sheer; B, section showing the palm stem butts placed between the two decks for buoyance; C, plan; D, sail plan, with scale greatly reduced. (Original drawings from photographs and rough sketches supplied by Mrs. H. R. P. Dickson.)

The craft has neither bow nor stern and can be used either way; there is no rudder. A flat board with a hole in the center supports a mast and sail, and is movable between the crosspieces of wood. A very light sail is sometimes used on a small pole.

One morning after a rain storm, when out for my morning ride on horseback, I found an old fisherman hoisting his sail to dry. It was made of $2\frac{1}{2}$ widths of strong unbleached calico (known locally as *merikan*). Since this is usually about three feet wide, this would make the width of the sail $7\frac{1}{2}$ feet; although I did not dismount, I did not think it was quite as wide as that. The shape of the sail was lateen; it was attached to a light bamboo yard by about eight robands of thin rope. So far as I know, it only sails before the wind.

Two oars are used for rowing and are fitted over the upright tholepins and tied by rough rope wound round the oars. These overlap a lot when in place. A rolled up mat, also made from short *javid* is spread out when the fisherman gets in, and he places on top of it his cloak on which he sits, just above the water which comes in underneath.

His line and basket of bait accompanies him, as well as an anchor consisting of a piece of flat coral stone with a wooden peg through a hole in the stone. Fish when caught are thrown in the bottom of the boat, where they live in water till the fisherman comes ashore and fills his basket with them. When soaked with sea water, these craft are very heavy. They are tipped up on their sides to dry when dragged up on the beach.

One man alone cannot drag them either down to the sea or up from it. I watched two fishermen one morning cleverly move one down to the water's edge. They took one of the oars and placed it under the end farthest away from the water. Then

holding on to the cross piece of wood in the end of the craft with one hand and raising her up with the oar they twisted her round and dragged it a little. This movement is repeated a second or third time until she is in the water. The fisherman then arranges his seat and gear, puts the anchor in, climbs in, and rows away back to the sea.

These craft are not used on the rivers; I have only seen them in Kuwait at Ras al-Ardh and Ras al-Ajusa.

Mrs. Dickson's excellent description shows that the reed canoes found in Oman and in Kuwait are apparently identical. Such craft owe their invention and survival to a lack of suitable wood for the construction of rafts, dugouts, or plank-built boats. Furthermore, all evidence seems to indicate that this type of craft developed on rivers or marshes in Egypt and Mesopotamia. Thus one immediately looks to the Tigris and Euphrates Rivers and the great marsh areas around these rivers in southern Iraq for comparative material. Today there are no reed rafts or reed canoes to be found on the main rivers, but there are several varieties of these craft to be found among the Marsh Arabs of southern Iraq.

The simplest form, known as the *chalabiya*, is described by Buxton and Dowson³¹ as a raft of reeds 8 to 10 feet long tied together at the ends so that it looks like a cigar. Another resembles a mattress of reeds with the forward end narrowed and turned up to a point; the stern is truncate.³²

A third type, known as a *tarrada*, is actually a reed canoe; it is used

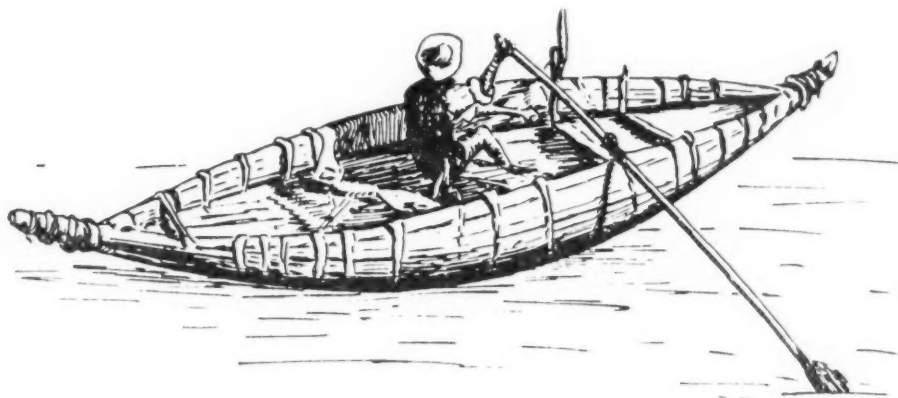


Fig. 3. A reed canoe of Mesopotamia; probably this is the *tarrada* used in the marshes south of Hilleh. (After Best, *The Maori Canoe*.)

³¹ P. A. Buxton and V. H. W. Dowson, 'The Marsh Arabs of Lower Mesopotamia,' *Indian Antiquary*, I (1922), 289-297.

³² H. Field, 'Anthropology of Iraq,' *Field Museum of Natural History, Anthropological Series*, XXX (1949), Plate 145, Fig. 1.

among the Afaij Arabs living in the marshes south of Hilleh. Layard³³ describes these as boat-shaped canoes consisting of a very narrow framework of 'rushes' covered with bitumen, and resembling in general shape the *mashhuf*, a flat-bottomed plank-built boat of the same area. Best³⁴ shows an illustration of a 'form of reed boat used in Mesopotamia,' but he does not give any further details or the local name of the craft or his authority for the sketch (Fig. 3). However, there seems little doubt that this is an illustration of the *tarrada*.

It would appear that the *shashah* and the *huwayriyah* of Arabia have approximately the same superficial appearance as the *tarrada* of the Marsh Arabs. Thus one is immediately struck with the thought that perhaps these Arabian craft are degenerate forms of the *tarrada*, since the latter was bitumen covered. However, as soon as the bitumen covering was discarded, the double bottom with *karab* floats between would have to be developed. So novel is this development that there can be absolutely no doubt that it did *not* happen independently both in Kuwait and Oman. Therefore, if this is a degenerate form of a type found in Iraq, it must have developed in one of its present locales and then diffused to the other; this does not seem plausible.

A more logical explanation would seem to be that the craft was developed on the rivers or in the marshes of Iraq, that it spread to Kuwait, to Oman, and perhaps to other places in the Persian Gulf, and that now it

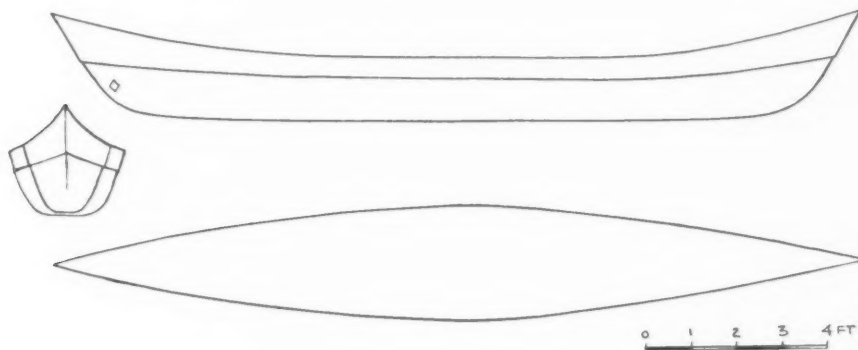


Fig. 4. Plan, sheer, and indicated sections of the South Arabian dug-out canoe with raised sides. The large majority of the dugouts used as fishing boats have raised sides, while those used as harbor boats are simple dugouts. (Original.)

³³ A. H. Layard, *Discoveries in the Ruins of Ninevah and Babylon* (New York: G. P. Putnam & Co., 1853), p. 552.

³⁴ E. Best, *The Maori Canoe* (Wellington, N. Z.: Dominion Museum, 1925), Fig. 99.

is found only at Kuwait and Oman. It is interesting to note that *shashah* is the word used by the Marsh Arabs to describe a tapered bundle of reeds. The fact that the canoe is found at both Kuwait and Oman would seem to obviate its independent invention at either of these two places. There seems little doubt that the craft was originally developed as a fishing craft, for it would be of little use for anything else. Only a more detailed study of the three can clear up the matter.

V

One of the major exports of the Malabar coast of India today is a teak-wood dugout canoe; for centuries it has been used by the Arabs in the Red Sea, the Persian Gulf, and the Arabian Sea as a ship's boat and as a fishing boat. It is universally known to the Arabs as *huri*. In the Persian Gulf and the Red Sea the craft is used as it is received from India (with the exception that the added-on pieces to fit each end are never used); however, along the coast of South Arabia the fishermen increase the freeboard of the canoe by the addition of a broad washstrake attached in clinker fashion to the outside of the gunwale (Fig. 4). Over 95 per cent of the *huris* used by fishermen in South Arabia have their freeboard thus increased (Plate 18). The average *huri* length at Aden seems to be from 14 to 16 feet in length, with a minimum of about 11 and a maximum of 36 feet; of 31 *huris* I examined in a little cove near Sira Island in Aden, 5 (16 per cent) were from 11 to 14 feet, 17 (55 per cent) were from 14 to 16 feet in length, 7 (23 per cent) were from 17 to 20 feet, and two were 36 feet in length.

Preliminary to adding the washstrake, the sides of the canoes are spread out; this is a necessity as there is originally a slight tumble home along the whole length of the dugout. A new dugout canoe is first buried in the sand up to the gunwales and filled with water inside. The tropical sun beating down on the water heats it to a tepid temperature; the outside sand is kept moist by pouring water on the sand. The net effect on the wood is akin to steaming, although much slower. After the wood has soaked several days numerous sticks of wood are used to force the gunwales out by continually driving them towards the narrower part of each end of the dugout. The process is continued slowly until the wood appears not to give any more without splitting. The sticks are left in and the canoe is partially dried before the washstrakes are added.

The washstrakes are lapped over the dugout hull an inch or so in clinker style and nailed on with iron nails clinched over inside on 6- to 8-

inch centers. The washstrakes are flared out at the top and a wedged stem piece is added at each end; they are cut so that they come to a point at each end. A coaming strip is nailed along the top outside edge of the new

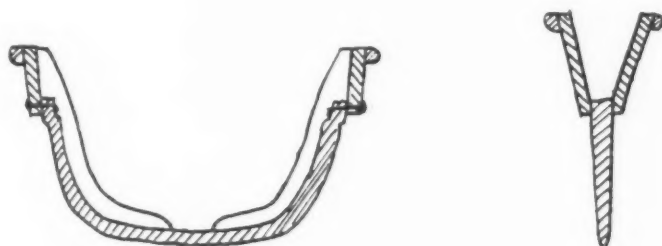


Fig. 5. Cross sections of the South Arabian dugout with raised sides. Left shows the paired ribs; right shows an end section. (Original.)

gunwale. After this work on the washstrakes has been completed they are wedged out a little if desired and ribs are nailed inside; the ribs are not U-shaped as in many other places where similar techniques are carried out, but are half-ribs added in pairs (Fig. 5). There are usually five pairs of ribs on medium sized *huris*. On the smallest craft there are only three pairs of ribs; on the two 36-foot *huris* mentioned above, one had five pairs of ribs, the other eight.

In all the original *huri* hulls there are widely spaced sham ribs carved in relief inside; these project about one-quarter of an inch above the skin line of the hull on the inside. These are several inches wide and the number is proportional to the length of the *huri*, ranging from three in an 11-foot *huri* to ten in a 36-foot one. The paired half-ribs are never placed on top of these. After the ribs have been securely fastened to the hull and the washstrakes, the temporary wedges are removed and replaced by thwarts which are placed at the level of the original gunwale of the dugout; these prevent the sides of the dugout underbody from pulling in again. There are usually three thwarts which serve as seats and as the mast bench, for most *huris* are equipped with a sail which is raised with a favorable wind.

Huris with raised sides are invariably used by fishermen; the unpainted hulls are kept oiled with fish oil and are hauled out of the water as soon as fishing activities are over. However, at Aden a few of these dugouts with raised sides are used as harbor boats, and are often painted; when painted they sometimes have green triangles with eyes both fore and aft.

I saw two plain dugouts at Aden with tarred hulls. There were oculi in a roughly triangular area marked off with a white line on the black hulls; one hull had double oculi on both ends (Fig. 6). At Mukalla most

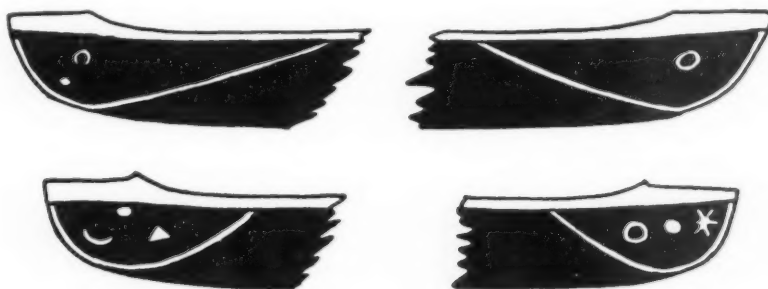


Fig. 6. Oculi designs on two dugout canoes used as harbor boats at Aden. The hull is tarred, and the designs are painted in white. The lower canoe has double oculi on both ends. The canoes did not have raised sides. The white square, triangle, and circle are holes cut through the hulls. (*Original.*)

of the plain dugout harbor boats had undecorated hulls. Just as most of the fishermen use dugouts with raised sides, so one finds 95 per cent of the harbor boats are plain dugouts (Plate 18). This was true at both Aden and Mukalla. Sometimes a coaming strip is added to the edge of the gunwale on the outside of plain dugouts.

Hornell³⁵ relates that the same general procedure of raising dugout sides is applied to the Tinnevely fishing canoes of South India. Sometimes heated stones are dropped into the water to heat it. However, the construction is basically different, for U-shaped frames are inserted after the sides of the dugout have been flared; then (and only then) a deep washstrake is added in carvel fashion on top of the dugout gunwale. In this type of craft Hornell saw the first step in the evolution of the carvel-built boat. Very probably the construction of the South Arabian *huri* outlined above is relatively recent—at least since the arrival of European ships in the Indian Ocean in the sixteenth century and the consequent introduction of nailed construction, for such a design would not be feasible using a sewn construction. The change probably occurred abruptly when some Arab carpenter found that the washstrake could be nailed onto the gunwale in clinker style more easily than it could be sewn on in

³⁵ J. Hornell, 'Making Dugout Canoes,' *Mariner's Mirror*, XXXIV (1948), 46-51; *Water Transport* (Cambridge: University Press, 1946), p. 192.

carvel style—actually making a stronger job. Canoes with the same general lines are found in India, but the planks are always sewn on in carvel fashion.

VI

Along the South Arabian coast, stretching from west of Aden for at least four hundred miles east to Shihr (and probably farther), a sewn boat is still to be seen today (Plate 18). Examples of sewn boats in other areas are gradually becoming extinct; the *mtepe* and the *dau* of the Lamu Archipelago in East Africa, and the Sinhalese outrigger coaster of Ceylon are apparently no longer to be found, although they did exist well into the present century.

Sewn boats are favorites with hundreds of fishermen along the coast of South Arabia, and apparently have survived because the fishermen actually believe that they are more suited to this open coast than boats of nailed construction would be. The South Arabian coast has few sheltered coves, so that most of it is exposed to a constant surf, which first the northeast and then the southwest monsoons keep rolling in from the Indian Ocean. The fishermen launch their craft through the surf, and pull them up on the beach every day when finished. Every fisherman with whom I talked emphasized the great strength and flexibility of the craft.

I first noticed the sewn boat at Aden; some were being used as long-boats for dhows, while others were being used by fishermen. The *huri* is the favorite of the Aden fishermen, but you find one sewn boat for every ten or twenty *huris*, and there are several hundred *huris* on Aden. The sewn boat is also found in fishing villages on the coast to the west of Aden.

This craft is used all along the barren coast between Aden and Mukalla wherever there is a fishing village, along with the *huri*. At Mukalla the sewn boat is seen more frequently than at Aden. It is also found at Shihr, thirty-five miles east of Mukalla, and probably farther east. Bent³⁶ reported the fishermen of Hami using sewn boats at the turn of century. Haines³⁷ reported sewn boats at Qishn, and Carter³⁸ reported that the inhabitants of Damqut used sewn boats in their fisheries. There seems a good chance that the sewn boat may exist today at these points and at many others east of Shihr along the barren coast all the way to Ras al-Hadd.

³⁶ T. Bent, *Southern Arabia* (London: Smith Elder and Co., 1900), p. 215.

³⁷ S. B. Haines, 'Memoir of the South and East Coasts of Arabia,' *Geographical Journal*, XV (1845), 110.

³⁸ H. J. Carter, 'Geography of the Southwest Coast of Arabia,' *J. Bombay Branch Royal Asiatic Society*, III (1851), 270.

Sewn boats have not been constructed at Aden for many years; they are likewise not built at Mukalla. At Aden I was told that they were built at Mukalla, and when at Mukalla I was told that they were built at Shihr. It seems that this last locale actually is a center for sewn boat construction. It appears that there may also be craftsmen who travel along the South Arabian coast and build these boats on contract, for Mr. Charles Inge of the Aden government told me that in 1941 he saw a boat builder just finishing the second of two sewn boats at Shuqra; the man said he was from Mukalla.

Since Villiers³⁹ mentions that he saw sewn boats in the harbor at Haifun, on the Somaliland coast, sewn boats are still apparently made there. Thus we may conclude that in addition to the South Arabian coast, sewn boats are still made in some places on the East African coast; the same type of boat is of nailed construction in larger sizes.

Evidence of the previous existence or the present survival of sewn boats in the waters around the Indian Ocean is of little significance in itself, for it is the generally accepted theory that all the native craft of the Red Sea, the Persian Gulf, and the Indian Ocean were of sewn construction prior to the entry of European powers into these waters, an event which was dramatically set in motion by Vasco da Gama in 1497. More important than the fact that a craft is of sewn construction are the details of this construction; unfortunately, we have few.

Most early European travellers were so surprised to find boats whose planks were sewn together that they usually described the boats as being 'sewn only with fiber,' and gave few if any other details. One of the few exceptions to this is Admiral Paris, who has given very complete details of a sewn boat of Muscat—the *beden-seyad*. This craft was about 30 feet in length and was constructed *without any ribs*. The bottom was flat and consisted of a single plank from which the sides (composed of two planks on each side) rose at an angle of about 45°. Paris⁴⁰ tells us little of the method of sewing except that 'small flat lashings . . . pierce the planks and press, in the interior, a sausage of oakum impregnated with a resinous composition of which the whole body is covered.'

At essentially the same time as Paris, Haines⁴¹ reported that the sewn boats used by the fishermen at Qishn had 'almost a flat floor, [and passed] through the surf in safety.' This would appear to be a boat of the same

³⁹ A. Villiers, *Sons of Sinbad* (New York: Charles Scribner's Sons, 1940), p. 110.

⁴⁰ F. E. Paris, *Essai sur la Construction Navale des Peuples Extra-Europeens* (Paris: Bertrand, [1841]), pp. 7-8.

⁴¹ S. B. Haines, *op. cit.*, p. 110.

general appearance as Paris' *beden-seyad*, and probably was a *beden*, since no other flat-bottom Arab boats are known (excluding the Marsh Arabs). Both of these sewn boats were used by fishermen.

We have ample descriptions of other sewn boats that survived down into the present century. The hulls of the *mtepe* and the *dau* of Lamu were probably characteristic of many sewn boats seen on the African coast, and have been carefully described by Hornell.⁴² Caulking and sewing was done simultaneously, there being rows of holes along the edges of each plank. Coir fiber was hammered into the seam from the inside, and was held in place by a protective band of (a) first a thick paste of pounded mangrove bark, intended to act as a preservative of the coir by reason of its tannin content, (b) then crushed strips of coconut husk, and (c) finally a layer of dried dom palm leaf-stalk strips. When the band was completed it was sewn down in position with a three-ply coir cord.

The sewing was done in six-foot lengths, going first from right to left and then from left to right. The method of sewing left three vertical turns of cord between the holes on the outside and single vertical and diagonal turns between the holes on the inside (Fig. 7). When the sewing was complete a peg was driven into each hole from the inside and snapped off short. The cord showing on the outside was cut away flush with the surface, except at the stem and the stern and along the keel at each end for a short distance, where protective bands are left on the outside. The joint was further strengthened with trenails through both planks. When the hull was completed U-shaped frame ribs were inserted and fastened by lashings passed through holes in the planking. The hull was further strengthened by two tiers of beams, one set projecting through the hull below the second plank down; the second tier were thwarts lashed across the gunwales.

On Lake Victoria in Africa there are found canoes made of a dugout base with two broad strakes sewn on. Hornell⁴³ has described the stitching in some detail. The planks are sewn with twine made of raffia fiber, passed several times through holes in the plank edges. To prevent leaks, pads of plantain fiber are placed over the seams both inside and out and held firmly against the joint by narrow wedges forced under the stitching from the outside. The canoes always leak and require constant bailing.

On the Upper Nile the Nuers make dugouts in two sections, because

⁴² J. Hornell, 'Mtepe and Dau of the Lamu Archipelago,' *Mariner's Mirror*, XXVII (1941), 54-68; *Water Transport* (Cambridge: University Press, 1946), pp. 192, 235.

⁴³ J. Hornell, 'Indonesian Culture in East Africa,' *Man*, XXVIII (1928), art. 1, pp. 1-4.

of the shortage of long tree trunks. Hornell⁴⁴ relates that the insecure butted joint is 'sewn together and protected on the inner side by a batten-like pad of grass or fiber caught under the connecting stitches of the sewing.' In India on the Madras coast, *masula* boats used for lighterage of cargo in open roadsteads are sewn boats without ribs; caulking seams are covered by caulking bands laced over them.⁴⁵ Paris⁴⁶ shows many other Indian sewn boats of similar construction.

Thus the general technique of sewing boats together is the same from central Africa to India: planks are set together in carvel style, caulked inside, and a protective pad of grass or palm fibers and leaves is laced under the stitching (and over the seam) on the inside (occasionally on the outside too).

* * *

While I did not actually see a boat being sewn in South Arabia, an inspection of many hulls seemed to indicate that they were sewn in ways similar to, if not identical to, the *mtepe* of Lamu (Plate 19). Holes are drilled along the edges of the planks two or three inches apart and about three quarters of an inch from the edge, and the planks are sewn together with continuous stitching.

Pads of palm leaf strips were laced under the stitching on the inside. The net effect of this stitching presented a crisscross pattern on the inside identical to the *mtepe* (Fig. 7A). On the outside, grooves were cut between the two holes in opposite planks so that the vertical outside stitches were flush with the surface, presenting no frictional resistance. It could not be observed whether or not the holes were pegged from the inside, but it does not seem that they were; at any rate no stitches were cut off inside or out. For additional strength bamboo trenails were driven obliquely from one plank to the other between every two sets of sewing holes, through holes starting on the outside of one plank and ending on the inside of the other plank (Fig. 8B).

Along the stem and the stern, and for a distance of about a foot and a half along the keel at each end, the crisscross stitching appears on the outside. This same identical arrangement of outside bow and stern pads occurs in the Madras *masula*, the Lamu *mtepe*, and the Oman *bedan*. Hornell⁴⁷ states that an 'outer protective band is necessary as here the strain on the seams is exceptionally great and has to be provided against.' How-

⁴⁴ J. Hornell, *Water Transport* (Cambridge: University Press, 1946), p. 191.

⁴⁵ *Ibid.*, p. 236.

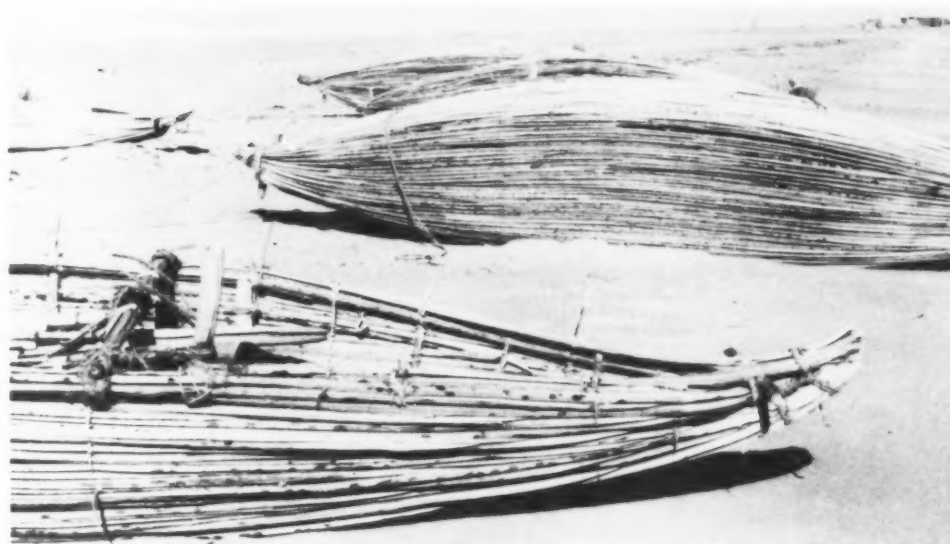
⁴⁶ F. E. Paris, *op. cit.*

⁴⁷ J. Hornell, 'Mtepe and Dau of the Lamu Archipelago,' *Mariner's Mirror*, XXVII (1941), 54-68.



Typical view of the reed canoe of Kuwait

Photograph by Mrs. H. R. P. Dickson



Group of reed canoes drying on the beach near Kuwait

Photograph by Mrs. H. R. P. Dickson



Mukalla Harbor. Plain dugout boats in the foreground; *bum*, *sanbug*, *beden*, *lanah* in background



Sira Island, Aden. Fishing dugouts with raised sides. Only one plain dugout is visible in the center



Mukalla. Sewn boat showing small rudder. Fishing dugouts with raised sides in the background



Mukalla. Sewn boat showing the elongated stem and sternpost. The stem is identical to that of the *bum*

ever, it would seem that strain had nothing to do with the problem. These outside pads and crisscross stitching were put on because the inside of these areas was inaccessible; obviously no inside stitching could be left.

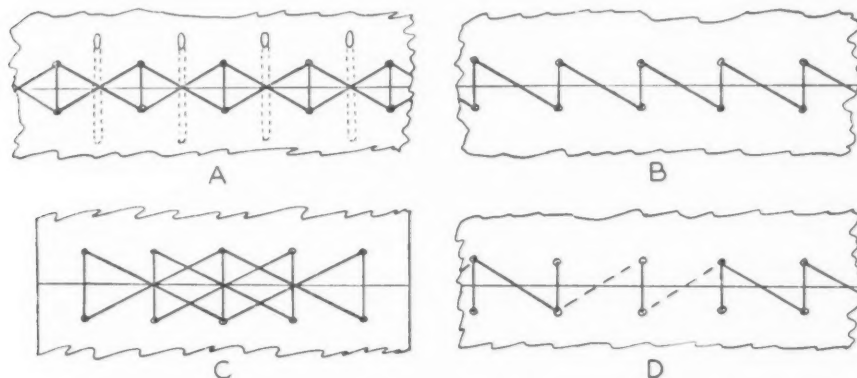


Fig. 7. Methods of stitching planks together. A, found in South Arabia and on the *mtepe* of Lamu. The drawing shows the crisscross pattern of the stitches on the inside; the caulking material under the stitching is not shown, although the diagonally driven trenails are. This crisscross pattern is seen on the outside along the stem and the sternpost and along the keel for a short distance at each end (*Original*); B, typical Polynesian form seen from the inside; C, vertical design seen on the outside at the ends of some Manihiki canoes; D, degenerate form of continuous Polynesian stitching seen on some canoes in the Tuamotu Archipelago. (B, C, D after Hornell, *Canoes of Polynesia, Fiji, and Micronesia*.)

The pads of palm fiber or leaves are an apparent attempt to make the seams watertight, but anyone who has had a leaky boat knows that little water would be stopped by laying (or even pressing) such a porous band against a leak. It seems that this technique undoubtedly developed on dugouts with raised sides, and that originally these pads were strips of wood (on the outside, or the inside, or both) which served the dual purpose of strengthening the joint and keeping any water that splashed on the joint out (these joints on a dugout would usually be out of water). When the raised-side dugout evolved into a plank-built boat the dugout underbody became the keel, and many of the seams were then under water all the time. In an attempt to waterproof the seams, resinous material and caulking were added under the strips of wood or palm leaves, which had originally served as splash guards and strengthening members.

Hornell⁴⁸ states that 'The protection of the caulked seams by sewn-on bands of fibrous material is another feature of doubtful origin, for it is known in the interior of Africa, in India and Indonesia, and formerly in Arab vessels—all are possible sources whence it may have reached this locality—the Lamu archipelago.' To the areas listed by Hornell should be added Polynesia; why Hornell omitted this vast area is not evident, since only a short time before he had written an opus on Polynesia.⁴⁹

On plank-built boats in the Tuamotu Archipelago there is a degenerate form of continuous stitching with caulking strips of coconut leaf mid-ribs enclosed under the stitches (Fig. 7-D).⁵⁰ At Manihiki there are wooden battens on the inside under the continuous stitching on dugouts with raised sides (Fig. 7).⁵¹ In New Zealand there are wooden battens both inside and outside under the continuous lashings on dugouts with a single washstrake.⁵² These Polynesian examples fit into the theory outlined above for the development of caulking pads: wooden battens are found on dugouts with raised sides, but in the plank-built boats of the Tuamotus the caulking strips are of fibrous material.

The types of stitching that are used to sew the planks of boats can be divided into two broad classifications: continuous stitching and single lashings. The continuous stitching is the type we have discussed above for Arabia and East Africa. Single lashings are single stitches through a pair of holes in each edge of two planks; there is no connection between neighboring lashings. The latter method is obviously the more primitive form, and continuous stitching developed out of it. In many places in Polynesia, Micronesia, Melanesia, and Burma single lashings were used to fasten the washstrake to the dugout underbody. In a few places in these areas one finds paired lashings, i.e., two lashings close together with a wide space between pairs. In the Society Islands the paired holes are in groups of two's and sometimes even three's; the stitching (plaited sennit) is continuous in the two's and three's, but not between the groups, and pegs are driven into the holes to keep the stitches from slackening.⁵³

The continuous stitching that is found in Polynesia is basically the same, although slightly different from that found in East Africa, Arabia, and India. It is identical to what would be found in these latter areas if

⁴⁸ Ibid., p. 65.

⁴⁹ J. Hornell, *Canoes of Polynesia, Fiji, and Micronesia* (Honolulu: B. P. Bishop Museum, 1936).

⁵⁰ Ibid., p. 53.

⁵¹ Ibid., p. 180.

⁵² E. Best, *The Maori Canoe* (Wellington, N. Z.: Dominion Museum, 1925), p. 78.

⁵³ H. S. C. Hardy, *Houses, Boats, and Fishing in the Society Islands* (Honolulu: B. P. Bishop Museum, 1932), pp. 50-52.

the stitching were run in one direction only and were not reversed and run the other way. The Polynesian continuous stitching consists of several turns between each pair of holes and then a single diagonal on the inside to the next pair of holes (Fig. 7-B). This leaves several vertical

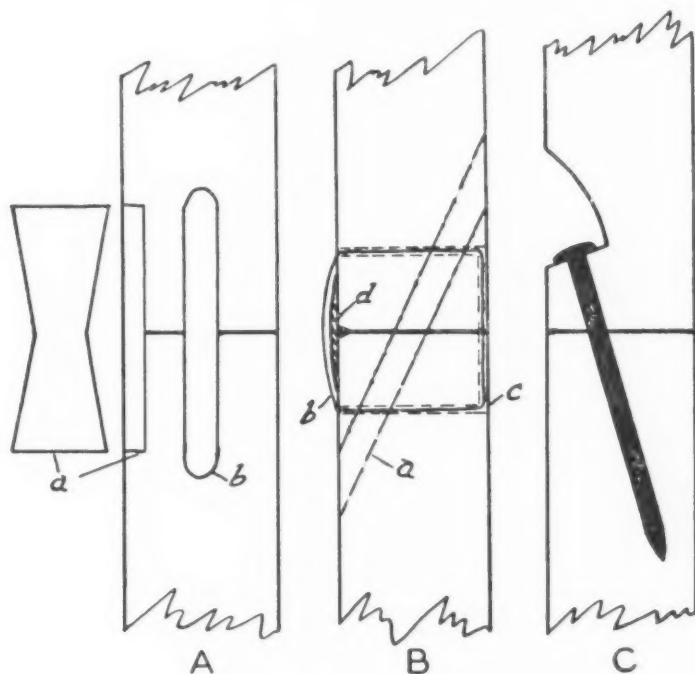


Fig. 8. Methods of joining plank edges (the outside of the boat is to the right in each case). A, ancient Egypt as seen in the Dahshur boats: *a* is a dove-tail tenon; *b* is a dowel (After Hornell, *Water Transport*); B, in the South Arabian sewn boat and the *mtepe* of Lamu: *a* is a bamboo trenail, *b* is the stitch, *c* is the vertical groove on the outside between the two holes, *d* is the caulking material (Original); C, found today in Nubia and the Sudan: obliquely driven nails. (After Hornell, *Water Transport*.)

turns showing on the outside and a series of capital N's on the inside. If a reverse line of stitching were run, the pattern on the inside would be similar to that found in the western Indian Ocean. Thus it seems certain that the two types of continuous stitching have a common origin; the method used in the west is probably a later development. However, the Polynesian method may be a degeneration of the original type, although it seems logical that the N-type was an intermediate step. In the Tua-

motus there is a degenerate form of the N-type stitching: there are only single turns or half turns between each pair of holes and the diagonals are both inside and outside and run in both directions (Fig. 7-D). That the Polynesian form is definitely related to the western form is shown by the canoes of Manihiki: there are complicated vertical crisscross stitches at the stem and stern (Fig. 7-C). These are very similar to the western crisscross stitching in principle.

It is an accepted fact that Indonesians (from Java and/or Sumatra) made voyages and migrations to India, East Africa, and Arabia, some of the voyages being as early as the turn of the Christian era.⁵⁴ These voyages are substantiated by both historical and anthropological evidence. Some have hypothesized that Polynesia was settled from some part of Indonesia (not necessarily Java or Sumatra), but this is disputed by many. However, it would seem that the method of continuously sewing planks together and placing caulking pads under the stitching may have spread from central Indonesia both east and west. If this were true we must assume that the crisscross method of stitching developed in the western Indian Ocean later. However, since Indians are known to have colonized Java and Sumatra before the Christian era, this technique could have originated in India and spread from there into Indonesia and Polynesia. If this were true, it is plain that it was introduced into Indonesia and Polynesia before the crisscross method was developed in the west. So unique are both these techniques (continuous stitching and caulking strips) that it is absurd to suggest an independent origin for this combination in two separate areas.

A clue to the date of the development of continuous stitching might seem to be given in a thirteenth-century miniature of al-Hariri's *Maqamat*.⁵⁵ Here the planks are definitely sewn together, and it seems abundantly clear that the stitches are paired lashings (Fig. 12). If this were the custom at the time it would seem to indicate that continuous stitching was not common in Arabia until after the thirteenth century. It is perhaps more than a coincidence that Ibn al-Mujawir, writing in about 1233, relates that the people of al-Komr (Madagascar) arrived at Aden in outrigger ships and took the town from the fishermen.⁵⁶ These people were without doubt Indonesians. All recent examples of sewn boats that have existed in the Western Indian Ocean are of the type of continuous stitch-

⁵⁴ G. Ferrand, 'Madagascar,' *Encyclopedia of Islam* (London: Luzac & Co., 1936), III, 64-75; 'Le K'ouen-louen,' *Journal Asiatique*, XIV, 68; 'Sayabiga,' *Encyclopedia of Islam* (London: Luzac & Co., 1934), IV, 200-201.

⁵⁵ G. F. Hourani, *Arab Seafaring* (Princeton: Princeton University Press, 1951), Plate 7.

⁵⁶ G. Ferrand, 'Madagascar,' *Encyclopedia of Islam* (London: Luzac & Co., 1936), III, 64-75.

ing described above for South Arabia, and thus may be a late importation from Indonesia.

Hornell⁵⁷ states that 'The binding together of planks by obliquely driven pegs of trenails is another unusual method of hull construction,

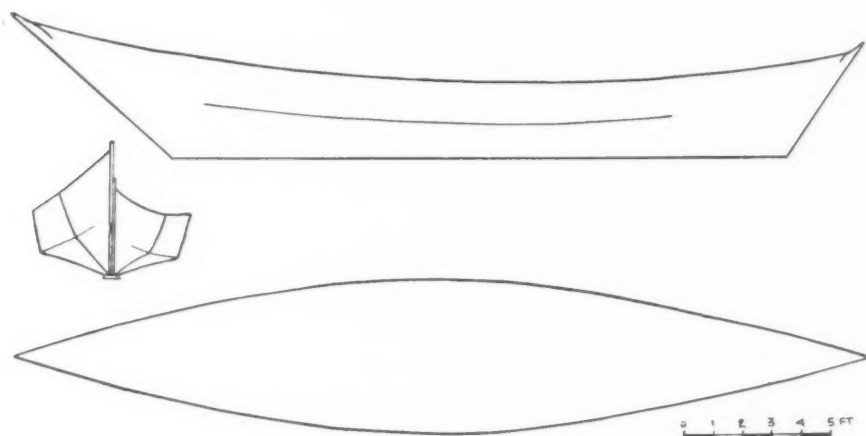


Fig. 9. Sheer, plan, and indicated sections of the South Arabian sewn boat. (*Original.*)

paralleled so far as I know only in three other localities—the Upper Nile, the Gujerat coast of India and in some craft in northern Russia; in these instances iron nails are now substituted for wooden pegs.' In ancient Egypt as seen in the Dahshur boats there was a broad dowel set vertically into the edge of each plank with a dovetail tenon to hold the planks together (Fig. 8). It would seem that the next step in the development of this dowel for keeping the edges of two planks together would be the obliquely driven trenails found today in East Africa and Arabia. A degenerate form of this, or perhaps a more modern iron age form, is found on the Upper Nile in Nubia and in the Sudan; it consists of a nail with a recessed head driven obliquely into two planks (Fig. 8). Thus it would seem that the method of obliquely driven trenails can be traced to ancient Egypt, while the technique of continuous stitching is probably of Indonesian or Indian origin.

* * *

The sewn boats of South Arabia are beautifully built; in fact they are the most skillfully built of all Arab craft. Most Arab dhows are 'thrown'

⁵⁷ J. Hornell, 'Mtepe and Dau of the Lamu Archipelago,' *Mariner's Mirror*, XXVII (1941), 65.

together with the wood that is available. The planks in an ordinary dhow may be of different thicknesses, and are never the same width. When the dhow has all the planking run there are a lot of little spaces which are filled up with patches. Not so the sewn boat: the planks are of uniform

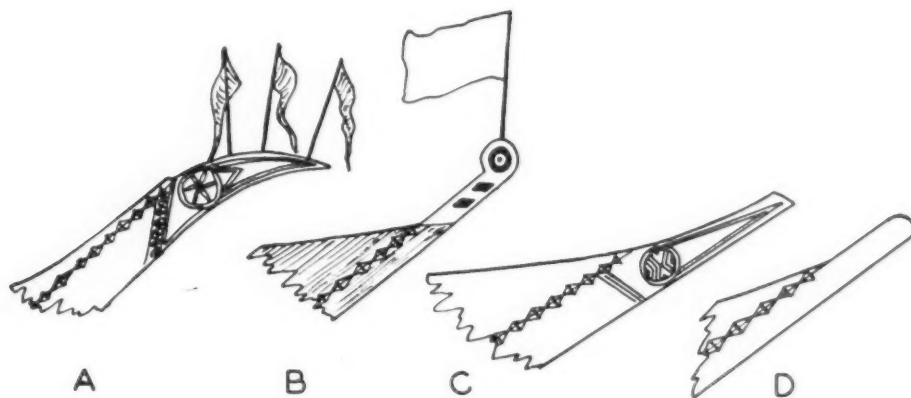


Fig. 10. Stemheads of South Arabian and East African sewn boats. A, the *mtepe* of Lamu (Original drawing from a photograph of a model in the Science Museum, South Kensington); B, on a sewn boat at Shihr, South Arabia (Original drawing from a photograph by Alan Villiers); C & D, on sewn boats of Mukalla. (Original.)

width and thickness and of a good grade of teak. The sewn boat is about 30-35 feet in length, occasionally a little shorter or a little longer.

The sewn boat of South Arabia is the only Arab craft to my knowledge built with a chine line (but no chine piece) (Plate 19). The craft is double-ended with a handsome sheer, and the chine line is roughly parallel to the line of sheer (Fig. 9). The stem and sternposts are straight members roughly twice the thickness of the planks, which come together at the bow and stern; the planks are not rabbeted into the stem or sternpost, but simply butt against them. The keel is a flat member which narrows at the bow and the stern to the thickness of the stem and sternposts, which are set at angles almost identical with those found in the *mtepe* and the *bum*.

While the stem and sternposts are always perfectly straight members there is apparently considerable variation in the way the stemhead and the sternpost head are finished off. In some, both the stem and the sternposts are rounded off so that the craft looks identical to a small *bum* (Fig. 10-D). However, on the South Arabian coast the stemhead (and the stern-

post head) are usually finished off so that the line of the sheer is continued almost to the end (Fig. 10-C). Villiers⁵⁸ took a picture of a sewn boat with a different type of stemhead at Shihr. Here the stemhead ends in a backward-turned scroll surmounted with a flag (Fig. 10-B). This type of stemhead ornament (scroll) is very common to India, and undoubtedly owes its origin there. The flag on the stemhead is a peculiar feature, known only on the East African coast (Fig. 10-A). However, in some of the Polynesian islands (Marquesas Islands particularly) there are vertical ornaments on the prow that are apparently feathers or carved wooden pieces; there are three ornaments just as in East Africa.⁵⁹

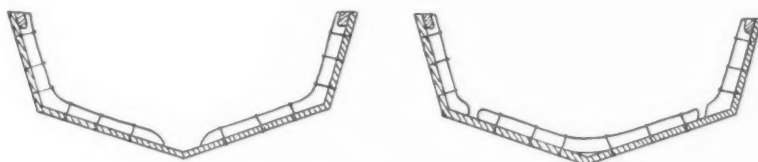


Fig. 11. Ribs of the South Arabian sewn boat. Left shows two-member rib; right shows three-member rib. (Original.)

There is usually a conventionalized oculus on both sides of the stem and the sternpost. When present, this is always carved into the wood. Sometimes the central design is a six-rayed star, sometimes a five-rayed star; other times it is a complex geometrical pattern. These are never painted when on fishing boats. However, the oculi of the *mtepe* were highly painted.

A small rudder is hung below the waterline, usually tied on by lashings through two holes, although occasionally three holes are found. The rudder is controlled by two lines leading from a hole in the after edge of the rudder to the gunwale on each side, where they are fastened. A Koranic verse is always carved on the stern (Plate 19).

It seems that the ribs must have been inserted after the boat was completed, since the seam caulking and stitching runs under the ribs and does not tie into the ribs. The ribs were not U-shaped frames as was the case of the *mtepe* of Lamu; instead they were constructed of segments just as in all Arab dhows (Fig. 11). One set of ribs consisted of members running from the gunwale almost to the keel on each side. Then the next set of ribs ran from the gunwale on each side just past the chine; a third

⁵⁸ G. F. Hourani, op. cit., Plate 8.

⁵⁹ E. Best, op. cit., pp. 230, 280.

member ran between the two chines. These two- and three-member rib sets alternated and were lashed onto the shell through several sets of holes. A gunwale strip was run along the inside on each side and the ribs were notched over these. Several strong thwarts tied the gunwales together, acting as mast bench and seats.

The sewn boat of South Arabia is never painted when it is used for the purpose originally built—fishing—but when an old one is used as a ship's longboat, it may be found painted and may have green triangles with eyes both fore and aft. The fisherman keeps his sewn boat nicely oiled, topsides as well as bottom, and pulls it out of the water after fishing every day. The relatively new boats are a tan color, while old boats tend to darken up.

I have purposely referred to this interesting craft as nothing but the 'sewn boat,' because I was unable to find any agreement among the Arabs in different areas as to its name. At Aden all of my informants agreed that the craft was known as the *'ibri*. However, when at Mukalla I was rather distressed to find that the craft was generally known to the fishermen simply as *sanbuq*, while a few called it *huri*. When I asked the men of Mukalla what the *'ibri* was, several pointed to a large double-ended boat of some forty or fifty feet in the harbor. The boat apparently did have the same lines as the South Arabian sewn boat, but it was of nailed construction and was from Somaliland. The Mukalla men who told me that it was an *'ibri* knew all this, so they apparently thought that the term applied to an African craft. This could explain the use of the term in Aden, as Aden has other close cultural connections with the African coast so far as its watercraft go. I was told at Aden that now the large craft of this type were of nailed construction and only the smallest craft were sewn. Today, the only large-tonnage craft of this general design found in South Arabia is the *zaruq* of Yemen.

*Sanbuq*⁶⁰ is the term now commonly used by Arab mariners to refer to a type of transom-sterned dhow, which cannot be older than 1497, because the design was undoubtedly copied from the Portuguese. The fact that the South Arabian sewn boat is known as *sanbuq* by fishermen on the isolated coast is not actually as confusing as it seems. Hourani⁶¹ relates that *sanbuq* was a common type of Arab ship in medieval times. Thus the logical assumption is that the sewn boat of the south coast of Arabia is the lineal descendant of the medieval *sanbuq*. How a transom-sterned

⁶⁰ Webster's New International Dictionary of the English Language (Springfield: G. & C. Merriam Company, 1950), p. 2209, gives *sambuk*, but *sanbuq* is the correct form.

⁶¹ G. F. Hourani, op. cit., p. 89.

dhaw copied from the Portuguese came to be called a *sanbuq* is not evident. The widespread use of the term today is even more confusing: the term is also used for the same type of transom-sterned dhow in the Red Sea and the Persian Gulf.



Fig. 12. Thirteenth-century Arab ship. The people appearing in each porthole below decks, and four people on deck have been omitted from the drawing for simplicity. The lines of this ship show that it is the prototype of the modern *hum*, and show that the sewn boat of South Arabia is closely related to it. (Original drawing from a photograph by the Bibliothèque Nationale, Paris.)

In addition to the thirteenth-century miniature mentioned above, there is another thirteenth-century one showing a similar craft with a broken mast;⁶² both these show sea-going vessels with lines very similar to those of the modern sewn boats of South Arabia. While both are sewn, we have seen above that the stitches were probably not continuous. The main difference between these medieval ships and the modern sewn boats is the angle of the stem: the medieval craft do not have the great forward rake of the modern sewn boats (Fig. 12). One of these medieval ships even

⁶² F. Moll, *Das Schiff in der bildenden Kunst* (Bonn, 1929), Plate A III, Fig. 3.

has conventionalized oculi on both ends of the hull (not on the stem or sternposts, though); these are very similar to those shown on the eighth- and ninth-century Boro Budur ships. The Persian Gulf *bum* is in the same family as these craft, and it may be assumed that it is the lineal descendant of the ships shown in the manuscript.⁶³

A comparison of the lines of the *huri* with those of the sewn boat shows that the two have an amazing similarity. This similarity is so striking that one has the feeling that they must represent successive steps in the evolution of the type of boat typified by the sewn boat of South Arabia. The *huri* is basically what is called a five-piece canoe (underbody, two washstrakes, and stem and stern pieces). This is the first step above a plain dugout. As more and more planks were added to the sides, the dugout underbody was finally reduced to a keel-like axial beam of a fully plank-built boat.

There is no doubt whatsoever that the *huri* is of Indian origin: the dugout is actually imported from India. Many five-piece canoes are found in India today with lines very similar to the *huri*. This would seem to indicate that the type of boat illustrated by the South Arabian sewn boat also originated in India; at any rate it did not originate on the timberless South Arabian coast. There were many craft of this general design preserved into historical times in India. The only other place where it could have originated would be the Tigris and Euphrates Rivers, and the indigenous plank-built boats of this area are fundamentally different, showing affinities with ancient Mesopotamia. The Arabs may be credited with the development of the long, raking, snout-like stem characteristic of the *bum* and some South Arabian sewn boats, for this is unknown in India.

Hornell⁶⁴ came to the conclusion that the *mtepe* was obviously not of Persian or Arab origin but was of Indonesian origin because of three peculiar characteristics: (a) presence of round oculi at each end; (b) encircling bands around the stem; (c) the use of a rectangular sail lashed between a yard and a boom. However, oculi were found on Indian ships of the seventh century (Ajanta frescoes) and in the thirteenth-century Arab miniature mentioned above; encircling bands around the stem were found on Arab ships in the Persian Gulf. The rectangular mat sail is not similar to the sails found on the eighth- or ninth-century Boro Budur, as Hornell says, for these latter are balance lugs. That the square sail of the *mtepe* is not related to the balance lugs of the Boro Budur ships

⁶³ R. LeB. Bowen, Jr., 'Arab Dhows of Eastern Arabia,' *THE AMERICAN NEPTUNE*, IX (1949), 97.

⁶⁴ J. Hornell, 'Indonesian Influence on East African Culture,' *Journal Royal Anthropological Institute of Great Britain and Ireland*, LXIV (1934), 305-332.

is shown by the fact that balance lugs identical to the Boro Budur sails are found on a dugout off the East African coast. There seems to be little doubt that this square sail of the *mtepe* is of ancient Egyptian origin, and was also used in the Red Sea and on the African coast. The Greeks and the Romans used sails of the same general proportions as the *mtepe* with a boom at the foot; however, the fact that the *mtepe* sail is of matting shows Egyptian affinities.

Later Hornell⁶⁵ decided that the *mtepe* originated in the Maldive Islands (a) because of the square sail, which he now states is characteristic of these islands, and (b) because the lines of the *mtepe* approximate those of the smaller sailing craft of these islands. However, there is no evidence to substantiate either of these claims; Hornell seems to have set up these points to prove a migration theory he was proposing at the time.

It may be said that the *mtepe* is one of the few examples of an *indigenous Arab* design, for it was probably brought to East Africa by some of the numerous Arab colonists who had been migrating to East Africa sporadically since the turn of the Christian era. If there is still any question about the *mtepe's* Arab ancestry in the reader's mind, a comparison of the stemhead of the *mtepe* with that of a sewn boat seen at Mukalla (Fig. 10-A and C) will settle the doubt. The two designs are practically identical: both have conventionalized oculi, both have a triangular outline in the fore part of the stemhead, and both have linear designs just below the oculus. By simply curving the Arabian stemhead downward, it becomes identical with the *mtepe*.

VII

In the first half of the nineteenth century there was a strange craft observed in certain Yemen ports in the Red Sea by both Paris and Osgood. Paris reported the craft from Mocha, while Osgood described one at Hodeida. Osgood related:

I took my seat in . . . a shell of a canoe, the planking of which was sewed together. A small sail was hoisted forward, and, its sheet being hauled well aft, the rudderless craft was steered and kept in the wind by those on board, by fleeting forward when wishing to come to, and aft when desiring to fall off.⁶⁶

The craft that Paris described at Mocha was of nailed construction and about thirty feet in length. It carried a square sail peculiarly rigged and also without a rudder. Paris related:

⁶⁵ J. Hornell, 'Mtepe and Dau of the Lamu Archipelago,' *Mariner's Mirror*, XXVII (1941), 54-68.

⁶⁶ J. B. F. Osgood, *Notes of Travel* (Salem: 1854), p. 162.

The Arabs only succeed in [sailing] by grouping themselves about the mast, if they wish to remain close: then the stern raises itself, received the impulsion of the wind, the shock of the waves, and the little boat, thus directed goes along, changes its direction every moment and, despite continual jerks, remains rather close, while digressing four or five points. When those manning it wish to run downwind, they sit in the stern, and it is because of this, in changing the draft of water by shifting the position of their weight, that they direct themselves.⁶⁷

Paris stated that the sail of this craft was constructed of cotton cloth. An interesting fact about this craft is the peculiar method of sailing without the use of a rudder. Apparently this method of sailing is extinct now in Yemen; it certainly is an ingenious use of the shifting of the center of lateral resistance of the hull.

We have seen above that from early times Javanese and Sumatrans made voyages to, and at times settled at, India, Ceylon, and Madagascar. An Arab historian writing in the thirteenth century related that the people from Madagascar arrived at Aden in outrigger ships and took the town from the fishermen, but were later driven out by neighboring Arabs.

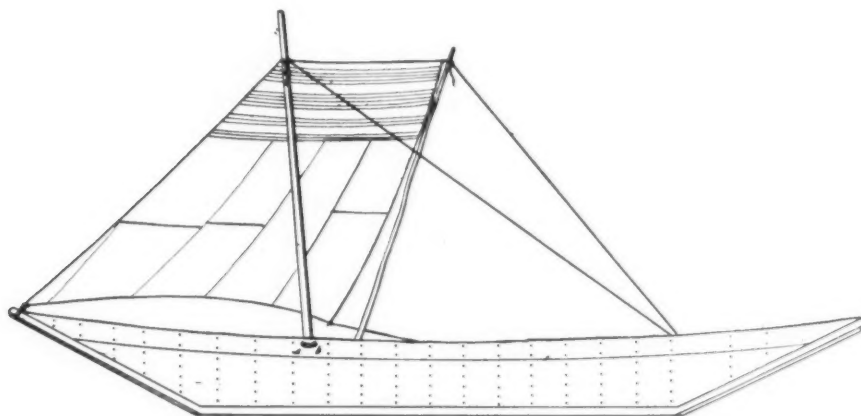


Fig. 13. Boat from Mocha, Yemen, carrying a sail of Indonesian origin. (After Admiral Paris.)

It is quite remarkable that there has existed at Madagascar and Ceylon a sail rig that may be equated with some of these Indonesian migrations, since there is an identical rig found today in Sumatra. These are all identical to Paris' illustration of the sail of the Mocha, Yemen craft (Fig. 13).

⁶⁷ F. E. Paris, *op. cit.*, pp. 7-8.

It would seem that this rig must have been introduced to Yemen by Indonesian influence from Aden, either directly or by diffusion.

All the *huris* I saw under sail at Aden carried an Arab lateen hung from a light yard. I was told that many of the fishing *huris* carried square sails, but I never managed to see the Aden fishing fleet in operation. There were some sewn boats in Aden used as fishing boats; the owners of these said that they carried square sails. However, I had to wait until I reached Mukalla before I witnessed the South Arabian square sail in use.

At Mukalla there are dozens of *huris* and sewn boats used for fishing; all of these carry a square sail. I spent several weeks in the summer palace of the Sultan of Mukalla at Ras Mukalla in February 1950. The winter monsoon blew monotonously out of the northeast every day and kept an endless series of breakers rolling in from the Indian Ocean. However, during the early morning, the air was usually calm, although occasionally there was a land breeze. Shortly after sunrise the Mukalla fishing fleet started a mad race to the northeast. The fleet was composed mostly of *huris* with raised sides, and a sprinkling of sewn boats. Most of the *huris* had two men, some only one; the sewn boats usually carried two or three men. Utilizing the still morning, the men paddled the boats frantically to the northeast with the typical Arab oar (a stick with a round board nailed on it), or if there was a land breeze they sailed. Then in the after-

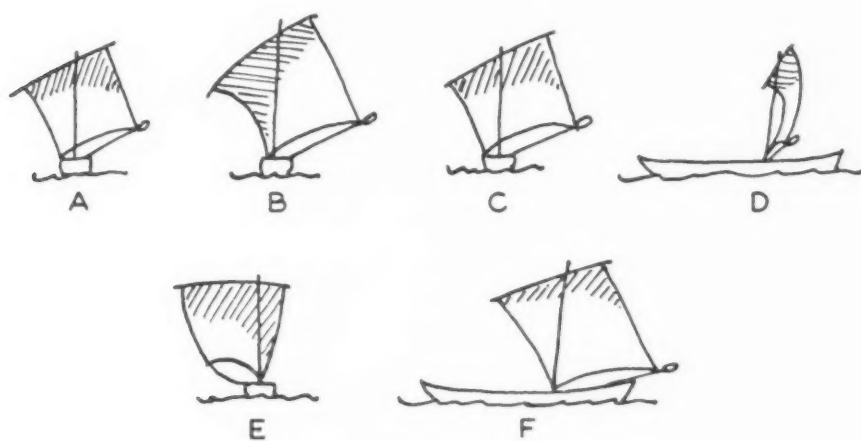


Fig. 14. Ways of setting the South Arabian square sail. A, B, C, D, show the sail set athwartships and the craft sailing downwind; E, shows the tack fastened to the bow while sailing downwind; F, shows a boat sailing to windward. (Original.)

noon the boats sailed back from the fishing ground on the northeast monsoon which had set in by afternoon. The boats started coming in at two or three o'clock and continued to come in up until five or six o'clock, apparently depending upon when they finally obtained a suitable catch. After the fleet had come in, every other person walking through the streets of Mukalla had a little string of silvery sardines—usually a dozen or so.

These sails are perfectly square. The mast is a light pole with a hole at the top to take the halliard; there is no sheave. The yard is a pole of the same size. There is no permanent fastening for the halliard on the yard; the halliard is simply tied to the yard each time the sail is raised. The sail is tied to the yard with a series of robands just as with the larger Arab lateen sails.

When sailing downwind the yard is usually hung one-quarter to one-third of the distance from the end, although it is sometimes hung in the middle (Fig. 14-A and C). When in the unbalanced position the long end often hangs down aft (Fig. 14-B). There is usually no sheet with the sail in this position; one corner of the foot is fastened to the gunwale amidships and the other is hitched to the outer end of one of the paddles which is lashed amidships. Sometimes in this unbalanced position the tack of the short side is belayed to the bow and a sheet is fastened to the other corner (Fig. 14-E). This is often the case with the larger sewn boats. With the sail in this latter position, the craft may be brought around into the wind, the sheet simply being hauled in until the sail is close-hauled. If the tack of the sail is fastened to the paddle amidships, it must be moved to the bow if the craft is to sail to windward (Fig. 14-F).

Actually the latter position is used only when sailing to windward or with the wind abeam; when sailing downwind for any length of time the sail is usually fastened down amidships. When a lot of boats were sailing downwind on the same course, some boats had the unbalanced end to the port, others to the starboard. When changing a course from downwind to windward or vice versa, the fisherman usually drops his sail and re-rigs it; there is no maneuvering. This is actually the easiest way, for I once saw a fisherman spend about ten minutes trying to maneuver from a windward to a downwind course—most of it spent fishing for the sheet, which was snapping just out of reach. First the tack of the sail on the short side had to be moved from the bow to amidships. This was easy as it was hitched to a paddle, which was lashed fore and aft so that it acted as a bowsprit; it was simply moved and lashed amidships. Then the sheet was retrieved and lashed to the opposite gunwale.

Most of the *huris* sailing in directly before the northeast monsoon used no rudder. They apparently had the knack of balancing the sail and the boat so that it kept an approximate course; the fishermen were sprawled on the bottom of the boats. This was certainly reminiscent of the rudderless Yemen craft described by Osgood and Paris in the middle of the nineteenth century. These *huris* were all steered with a paddle when they got close to their destination or when they wanted to change their course. Since the sewn boats all have underwater rudders, it is impossible to tell whether they are using them.

Hornell⁶⁸ has shown that the watercraft of the northwest coast of India are influenced strongly by Arab designs. Arab influence may also be seen in boats along the coast for about a hundred miles south of Bombay. On the Malabar Coast one finds purely indigenous types of dugout canoes and catamarans. In the port of Mangalore on the northern Malabar Coast there are local cargo boats, used for transporting clay to the tile factories in the town, that are plank-built enlargements of dugout canoes. These craft are rudderless and carry a single square sail. This sail is absolutely square and is apparently handled in a manner exactly similar to the way in which the South Arabian square sail sometimes is. Hornell relates that on the stretch of Malabar Coast between Cannanore and Quilon (about two hundred miles) the only indigenous craft are dugouts and plank-built enlargements of dugouts. Few of these carry sails; when they do it is a small, square sail or a spritsail (presumably European). None carry rudders, steering being effected with a paddle.

It would thus seem that the South Arabian square sail carried by *huris* and sewn boats can be traced directly to the Malabar Coast of India. This is not very surprising, in view of the fact that the dugout canoe of South Arabia is imported from Malabar, and the sewn boat of South Arabia is of probable Indian design. The fact that Arab influence in Indian boat designs stops several hundred miles north of the Malabar Coast would seem to rule out any spread of this particular square sail arrangement from Arabia to India. Smyth⁶⁹ illustrates a similar sail on the East African coast; apparently it is not of the *mtepe* mat sail type, and therefore is undoubtedly an extension of the Indian square sail, probably via Arabia.

A similar use of the square sail occurs in the Far East in China, for Worcester relates that

⁶⁸ J. Hornell, 'Sailing Craft of Western India,' *Mariner's Mirror*, XXXII (1946), 195-217.

⁶⁹ H. W. Smyth, *Mast and Sail in Europe and Asia* (London: Wm. Blackwood & Sons, Ltd., 1929), p. 351.

some junks, notably on the Ch'ient'ang River, carry a square sail slung from the center of the yard, which they use when the wind is fair. When, however, they require to tack, this square sail is at once transformed into a lug-sail by the simple expedient of bousing down the tack without even bothering to shift the position of the halyards.⁷⁰

A sketch that Worcester shows is identical to the position the South Arabian square sail assumes downwind, when in the unbalanced position and belayed amidships. However, this Chinese sail is set in a standing lug position when sailing to windward, while the Indian and Arabian square sails are set in a dipping lug position. Thus there is not necessarily any relation between the Chinese square sails and those of the western Indian Ocean.

VIII

In the introduction several statements were made regarding the apparent fact that the most primitive craft are found among the fisherfolk. From this it was suggested that to find the indigenous craft of an area one should look to the fishermen rather than the mariners, and it was further suggested that migrations are often indicated by the occurrence of foreign craft among the fishermen. It is extremely interesting to note that without exception all the primitive watercraft of modern usage discussed in this article are used by fishermen.

The most primitive watercraft found are swimming floats, which were probably imported from Mesopotamia, perhaps in Babylonian or Assyrian times. The reed canoes of Oman and Kuwait also have a probable Mesopotamian origin, and may be related to certain types still seen in southern Iraq.

The various forms of rafts (without floats) reported from Arabia undoubtedly owe their inspiration to India, as does the *huri*, which is actually imported from the Malabar coast. The square sails of both the *huri* and the sewn boats are also apparently of Indian origin, while the sprit-sail seen on a sewn boat in Yemen in the last century is of obvious Indonesian origin. It seems that the design of the sewn boat and the modern *bum* are of Indian inspiration, since the lines of these craft are similar to dugouts with raised sides, and also since no such design is native to Mesopotamia.

Notably absent from the Red Sea or the Arabian Sea are any primitive forms of watercraft which can be attributed to ancient Egyptian origin.

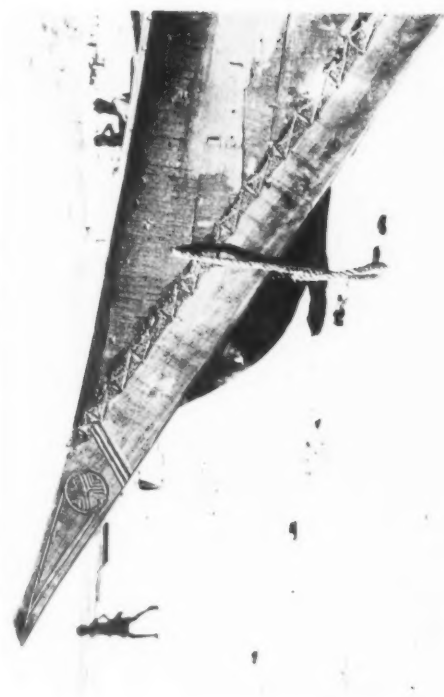
⁷⁰ G. R. G. Worcester. *Junks and Sampans of the Yangtze* (Shanghai: Inspectorate General of Customs, 1947), I, 67.



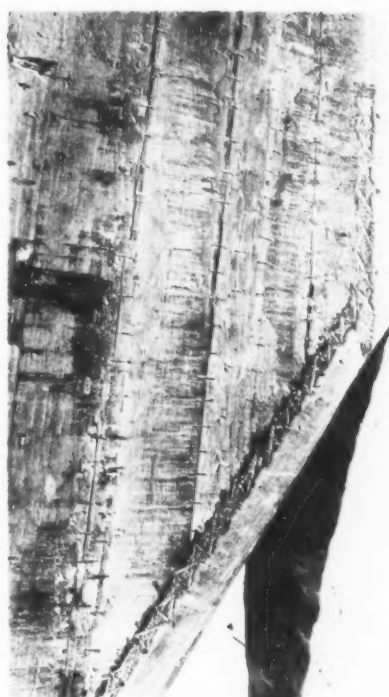
Mukalla sewn boat showing external stitching in the stern and Arabic verse on the quarters



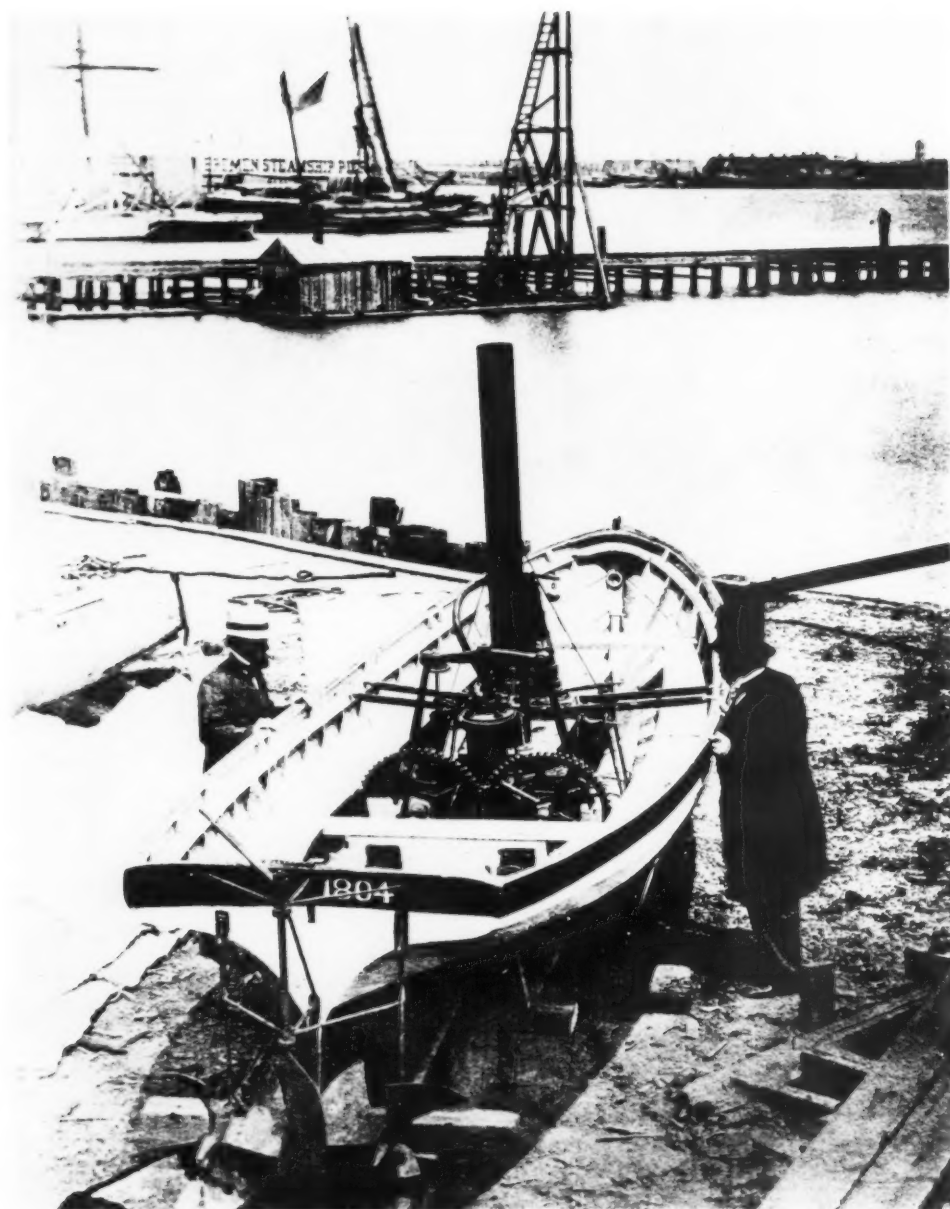
Mukalla sewn boat showing the definite chine line, although there is no chine piece



Mukalla sewn boat showing external crisscross stitching in bow and the conventionalized oculus



Mukalla sewn boat showing external crisscross stitching at the junction of the stem and the keel



Little Juliana showing the engine and boiler with the 1844 copies of the original screw propellers

However, it does seem that the method of obliquely driven trenails is of Egyptian origin. The square mat sail of the *mtepe* of Lamu is also apparently of Egyptian origin, as are also the square mat sails seen in the Red Sea on Yemen and Sudanese craft during the last century, although we have no details of these sails.

While it may seem strange that no Mesopotamian influence was found in the designs of the plank-built craft considered, there actually is a strong Mesopotamian influence in the boats of certain areas in Arabia, as will be seen in the future when the dhows of Oman are considered.

While the west coast of India is undoubtedly responsible for many of the primitive forms of watercraft found in Arabia, there has been a strange turnabout and the northwest coast of India has been strongly influenced in the last three centuries by Arab ship designs copied from European prototypes.

Richard LeBaron Bowen, Jr., is familiar to NEPTUNE readers as the chemical engineer with an intense interest in Arabia. During the winter of 1950, he was technical and engineering advisor to the American Foundation for the Study of Man Arabian Expedition, which conducted archaeological excavations in South Arabia.

George Scott, Slave Trader of Newport

BY KENNETH SCOTT

THE *Boston Gazette* of 30 September 1728 lists under Rhode Island Custom House entries for 27 September: 'Outward Bound, Scot and Malbone for Affrica,' while a bill of 1728 in favor of John Fletcher, of Newport, painter, against Godfrey Malbone, of Newport, merchant, 'to painting the brig *Charming Betty*, Geo. Scott, master'¹ would indicate that the ship on the voyage in question was *Charming Betty*, that the owner was the enormously wealthy merchant, Godfrey Malbone, and that its master was George Scott, born in Newport on 25 May 1706, the son of a merchant and house carpenter, John Scott and his wife, Elizabeth Wanton, grandson of John and Rebecca Scott, and great-grandson of Richard and Catharine Marbury Scott.² The business in which he was engaged is revealed by the following brief item on the second page of the *Boston News-Letter* of 29 April 1731:

We hear from Rhode Island, that Captain George Scot of that Place, who some time since went from thence to Guinea, and was returning with a Cargo of Negroes, they rose upon the said Commander & company, and barbarously murder'd three of his Men, the said Captain and the rest of his Company made their escape, tho' tis said they are all since dead except the Captain and a Boy; the Negro's we are inform'd were afterwards taken and made Slaves of by those of another Nation.³

The story of the revolt of slaves and their attempt to seize the vessel that was carrying them to servitude in America was not infrequent in newspapers,⁴ and this theme is to be found in fiction, as in Mérimée's *Ta-*

¹ 'A Newport Painter's Bill, 1728,' *Newport Historical Magazine*, III (1882), 56.

² John Osborne Austin, *The Genealogical Dictionary of Rhode Island* (Albany, N. Y.: Joel Munsell's Sons, 1887), p. 373.

³ This same account, obviously copied from the *Boston News-Letter*, is given on the third page of the *New-York Gazette* of 10 May 1731.

⁴ For example, the *Boston News-Letter* of 2 November 1732, under the heading, 'Newport, October 25,' states: 'Arrived a sloop from Guinea, Capt. Perkins late Commander, who on the 7th April last, was kill'd by the Negroes, who rose on the Sloop's Company, they kill'd several of the Negroes, and oblig'd some to jump down the Hold, and the rest to quit the Sloop, 13 of them getting into the Boat, and 9 into two Canoes, with 4 Negro Traders then on board, who 'tis thought

mango. Readers of the Boston newspaper probably expected nothing more than the few lines quoted above, so that they were doubtless surprised and pleased when they received the next number of the *News-Letter* on Thursday, 6 May, to find therein a detailed and vivid account sent in by the captain of the slaver, George Scott. The notice which he submitted to the paper is so ably written as regards style and spelling that, when it is confronted with one of his letters to be quoted below, it becomes clear that he received no little assistance from someone far better educated than he.

His communication occupied nearly two columns, that is, one-half of the entire number of the *News-Letter*. It was prefaced by a comment of the editor:

Since our last we have had a more particular Account of the Negroes rising and overcoming Capt. George Scot of Rhode-Island, in his return from Guinea, which we have been desired to Insert: And it is as follows, viz. 'I George Scott, (the Subscriber) Master of the Sloop the *Little George*, belonging to *Rhode Island*; Sailed from the *Bonnana* Islands on the Coast of *Guinea*, the first of *June* 1730. having on Board Ninety six Slaves (thirty five of which were Men.) On the 6th of said Month at half an hour past four of the Clock in the Morning, being about 100 Leagues distant from the Land, the Men Slaves got off their Irons, & making way thro' the bulk head of the Deck, killed the Watch, consisting of *John Harris* Doctor, *Jonathan Ebens* Cooper, and *Thomas Ham* Sailor; who were, tis thought, all asleep. I being then in my Cabin and hearing a Noise upon Deck (they throwing the Watch overboard) took my Pistol directly, and fired up the Scuttle which was abaft, which made all the Slaves that were loose run forwards except one or two Men (who seemed to laugh at the Cowardice of the rest, and defiance of us) being but 4 Men and a Boy,) who laid the Scuttel, and kept us down confin'd in the Cabin, and passing by the Companion to view us, we Shot two Men Slaves.

On so sudden a surprize, we were at a loss what to do, but consulting together, filled two round Bottles with Powder, putting Fuses to them, in order to send them among the Slaves, with a Design at the same instant of Time, to issue out upon them, and either suppress them or loose our Lives; but just as we were putting our design in Execution, one of the Slaves let fall an Ax (either thro' accident or design) which broke the Bottle as *Thomas Dickinson* was setting fire to the Fuze, and that taking fire with a Cagg of Powder, in the Cabin, rais'd up the Deck, blew open the Cabin Doors and Windows, discharged all our fire Arms but one, destroyed our

assisted and encouraged them to rise. A considerable Number of the Negroes came off afterwards in Canoes, and endeavoured to get on board, but were beat off, and the Mate afterwards recover'd the Slaves which escap'd. About the same time the Slaves on board a Guinea-man belonging to Bristol, rose and destroyed the whole Crew, cutting off the Captain's Head Legs and Arms.' Again, on 19 April of the next year the same newspaper reported: 'By a Letter from Portoprey, about 12 Days sail from the River *Gamba*, on the Coast of *Guiney*, dated Feb. 7th 1732,3 we have Advice, That a Portuguese Ship which had been trading on that Coast, was taken by the Negroes at *Oncha*, and that her hands were most all of them killed (the Captain was saved.): After the Negroes had the Ship five Days, one Capt. Pearson from *London* met with her, and fought with them 24 Hours before they would surrender; and then he bro't here to *Porto-prey*, where he secur'd the Slaves, and where the Ship remain'd.'

Cloaths and burnt the Man that had the Bottle in his hand in a most miserable manner, and my self with the rest very much hurt thereby.

Upon this unhappy accident, we expected no less than immediate Death, which would have been unavoidable, had they at that Juncture of time, rushed in upon us. And being in this consternation and hopeless, sent up the Boy in order (if possible) to bring them to Terms, but they slighted our Message. And soon after (the Smoke clearing out of the Cabin) we found the other Bottle of Powder which by Providence had not taken fire, and which put new Life and vigour into us, that we were resolved to withstand them to the uttermost; and accordingly Loaded our Arms & Shot several of the Slaves, which occasioned all the Men Slaves to betake themselves to the Quarter Deck, over our Heads. The Slaves then got two Swivel Guns, and filled them almost full with Powder, which they found in the fore Hold, as they were looking for Provisions, and designed to blow the Bulk-head in upon us, which they put fire to several times, but could not get off by reason of Weather. We had two Carriage Guns in the Boat, which we expected the Slaves would get out, and therefore watched them very narrowly; but in a dark Night they effected it, and brought them upon the Quarter Deck; they loaded one of the Guns, and pointed it directly down the Scuttle: we hearing them about the Scuttle and having prepar'd ourselves; so soon as they lifted it up, we Shot the Man dead that pointed the Gun, another of the Slaves standing by clapt a Match to it and fir'd it off, which blew the Scuttle all to pieces and some of the Deck, but did us no Damage. They then took pieces of Boards and laid them over the Scuttle and the Hole they had made in the Deck, and laid the Tarpawlin, with a great Weight upon them to prevent our coming up.

Then they made Sail (as they thought) towards Land and were continually heaving down Billets of Wood, and Water into the Cabin, with intention to Disable us and spoil our small Arms. And the Fourth Day after the Rising made the same Land we departed from, then stood off and on again for 4 or 5 Days more, in which time the Boy being forced by Hunger, run up among the Slaves, who immediately put him in Irons. They made several attempts to come down into the Cabin, but their Courage fail'd them. I then call'd to them to come down to decide the Matter, they answer'd, by and by.

Finding ourselves grow very weak, thro' these hardships, and for want of sustenance; we thought it proper before our Strength was quite spent to take some desperate Course. I proposed to cut away the Cieling and bore some Holes thro' the Vessels Bottom, which being approved on, was directly done, and let in about threefoot of Water, I then called to the Slaves, and told them, I would drown them all, which frighted them exceedingly: They then sent the Boy to the Cabin Door, to tell us, that they had but just made the Land, and that when they got a little nearer the Shore, they would take the Boat and leave them with the Young Slaves: I told them if they would do that I would not sink her. [My design in letting the Water in, was to force the Vessel on her side that we might get some advantage.] They stood in for the Land about 12 a Clock at Night, struck upon the Bar of Serrilone River, and were in great Danger of being lost. The Vessel being strong beat over the Bar, and they run Ashore about 3 Leagues up the River, on the North Side; being then High Water, and at Seven a Clock the next Morning there was not above 2 foot of Water along side.

The Natives waded from the Shore with fire Arms, wou'd have fain try'd to overcome us, but were perswaded from it by the Slaves on Board, who told them we should shoot them if they appeared in our Sight. They perswaded the grown Slaves to go Ashore, and drove the Young ones overboard and then followed them, making the Vessel shake at their Departure. Our Boy assuring us the Slaves had all left the Vessel, we immediately went up with our Arms, and saw the Slaves just Ashore. We found our great Guns loaded quite full. And as we hoisted out our Boat, the Natives mustered very thick on the Shore and fired at us divers times. We made what haste we could to the other side of the River, where we Rowed down about two Leagues, and found a Sloop riding in French-man's Bay belonging to Montserat, James Collingwood Commander, where we refreshed our selves, being all of us in a weak and miserable condition, having had nothing to subsist upon, during the Nine Days we were under this Affliction, but Raw Rice.

George Scott.⁵

Scott, who had been admitted a freeman of the colony on 6 May 1729,⁶ at the age of twenty-three, was married on 10 August 1732 in Trinity Church in Newport to Mary Neargrass,⁷ but he did not give up the sea or the slave trade. It is probable that he was at St. Christophers on 6 June 1734 when Hubert Guichard of that place gave him a draft for £380 sterling on a merchant, Humphrey Hill, in London.⁸

From the records of legal action taken by Edward Scott, acting as attorney for his brother George to recover money due from one John Prentice, some further knowledge of George's activities may be gleaned.⁹ In June 1739 George sold a negro girl to Mr. Joseph Wanton for £100; on 27 June of the same year he sold to John Prentice a negro boy for £80 4s. and on the following day a negro man and four negro boys for £420. Prentice, a substantial merchant and prominent citizen of New London, Connecticut, prompted perhaps by Scott's absence, tried to avoid payment of part of the £420. In May 1741, 'George Scott being absent,' Edward Scott wrote Prentice requesting payment, and Prentice promised to come to Newport in the fall and clear up his debt. On 30 December 1741, however, Edward Scott sent another letter requesting the sum due and touching upon the 'great hardship on my poor Brothers family to be kept out of the money even tho you allow the Interest, for if paid it might be improved in his Sugar House and Still house to much better advantage.'

⁵ The account is to be found in Elizabeth Donnan, *Documents Illustrative of the Slave Trade in America* (Washington: Carnegie Institution of Washington, 1932), III, 118-121.

⁶ John Russell Bartlett, *Records of the Colony of Rhode Island* (Providence: Knowles, Anthony & Co., 1859), IV, 420.

⁷ James N. Arnold, *Vital Records of Rhode Island* (Providence: Narragansett Historical Publishing Co., 1893), X, 467.

⁸ Rhode Island Public Notary Records, Vol. 4, p. 313.

⁹ Rhode Island Equity Court-File Papers, Vol. 5, pp. 79-80.

On 18 October 1742 a warrant was issued to arrest Prentice or attach his property, and Deputy Sheriff William Dyer at once attached seven hogsheads of sugar owned by Prentice. One Daniel Updike of North Kingstown, Rhode Island, gave bail for Prentice, whereupon the sugar was released. On 6 November 1742 Prentice gave Updike a power of attorney to act for him, and the matter of the debt came before the Inferior Court of Pleas at Newport on the third Tuesday of November. The verdict was in favor of Scott, and, when Prentice appealed, the Superior Court of Judicature upheld the decision of the lower court. Once more Prentice appealed, and this time also the verdict, handed down by the Court of Equity in April 1743, was in favor of Scott; Updike, who had given bond for Prentice, failed to pay the debt and costs of the trials and was ordered to appear before the Court of Equity to show why he had not made such payment. Presumably the matter was then regulated.¹⁰

In the fall of 1739 Scott entered upon a new venture in addition to his trading in slaves and operating his sugar house and still house, for, on 29 September of that year, he secured from Governor John Wanton of Rhode Island Letters of Marque to prey upon Spanish vessels or subjects within the West Indies. Along with Robert Taylor and Daniel Ayrault, merchants of Newport, he gave bond of £1,000 sterling to abide by the nine items of instructions given him by the governor. He was to command the sloop *Patience* of about ninety tons and mounting four carriage and ten swivel guns.¹¹

Patience proved as unlucky as *Little George* had been. On 9 April 1740 Captain Scott wrote to his brother-in-law, Daniel Ayrault,¹² from Anamabo that he had on board sixty men, twenty women, and some boys and girls and that he had not yet decided whether to carry the cargo to Jamaica or Virginia.¹³ On 13 June 1740, at sea, latitude 8° 30' N, longitude 39° 30' W, Scott wrote, probably to Robert Taylor and Daniel Ayrault: *Gentlemen, Meeting with this opportunity I was very glad to acquaint you of our*

¹⁰ This Captain John Prentice of New London soon acquired considerable repute as commander of the sloop *Defence* in the expedition against Louisburg. In April 1746 he accompanied James Bowdoin to England in a successful attempt to secure for the provincial seamen a share in the prize money, which had been withheld by Admiral Warren. While in England Prentice accepted an invitation to spend Christmas with the Edgcombs of Mount Edgcomb in Cornwall. On this tour he took the smallpox and died of it after his return to London in January 1747. (See Frances Manwaring Caulkins, *History of New London, Connecticut* [New London: Published by the author, 1860], pp. 391-393.)

¹¹ Rhode Island Public Notary Records, Vol. 4, pp. 431-433.

¹² Daniel Ayrault, who was born 2 November 1707 (see John Osborne Austin, op. cit., p. 7), married 3 July 1735, in Trinity Church in Newport, Susanna Neargrass, the sister of Mary, wife of George Scott (see James N. Arnold, op. cit., X, pp. 434 and 462).

¹³ George C. Mason, 'The African Slave Trade in Colonial Times,' *American Historical Record*, I (1872), 342-343, and Elizabeth Donnan, op. cit., III, 135-136.

Miserable voyage. We left Anamabo the 8th of May, with most of our people and Slaves Sick, we have Lost 29 Slaves, our purchase was 129. My Negro Bonner is Deed, the Slaves we have Left is now I think all recovered, We have five that's Swell'd and how it will be with them I can't tell, we have one-third of dry Cargo Left, and two hhgs. rum, if I had Staid there to a sold I believe we should Lost all our Slaves. I think to proceed for Antigo and fitt the Sloop and take the other trial on the coast, it will not doe to give out for one bad bout. If i goe directly back I'll sell the rum for gold if i gitt but twenty pence a gallon for it before i'll by slaves, the slaves that's Died I blieve there was none above twenty two years old and none under fourteen. I have sent by Capt. Lindsey Sixteen Ounces of gold, wich is all. I wrote you by Capt. Kinecutt who saild the 10th April, I have repented a hundred times the bying of them dry goods, had we Layed out two Thousand pound in rum bread and flower, it would purchased more in value than all our dry goods. I have paid a great part of the wages. My Serviss to all Freinds, pray Excuse all blunders for I am now aboard Capt. Lindsey and in haste to gitt aboard.

P.S. If I cant sell at Antego, so as I think is a good price I'll go to Jamico. G.S. Capt.

Eldred Shipt by me four Ounces gold wich I have sent by Capt. Lindsey to Mr. Ayrault. G.S.¹⁴

A month later, on 14 July 1740, Henry Bonnin of Antigua wrote, probably to Abraham Redwood in Newport, that he had heard from Captain Scott, who was then at St. Eustatius, with forty slaves still to be sold and who hoped to obtain there rum for his next voyage to Africa.¹⁵

The rest of the story of the ill-starred *Patience* and her master is given in a deposition made at Newport on 14 April 1744 by Thomas Wickham of that city, merchant, who swore upon oath as follows:

That He this Deponent being Master of the Sloop *Endeavour* sailed on Thursday the Sixteenth Day of October Anno Dni 1740 from the Bay of Honduras in Company with Capt. George Scott of Newport aforesaid Commander of the Sloop *Patience*, deeply laden with Loggwood, a considerable Quantity of which was upon Deck, Both said Sloops being bound for Rhode Island, said Scott and this Deponent weighed Anchor about ten of the Clock in the Morning in the Grand Bogue nigh Key Chappel, and in coming out said Scott's Sloop struck on the Reef, the Sea being very large, this Deponent believes She hurt her Bottom, tho Capt Scott told Him She did not leak much more than she did before, In this manner said Two Sloops proceeded in Company as far as to Cape Bonavista, on the the North Side of Cuba having had very bad Weather for fourteen Days, On the twenty ninth Day of said October this Deponent saw a Sloop to Windward about Six in the Evening, She bore down towards the Two Sloops aforesaid, But Night coming on, and the Weather very bad, this Deponent saw her no more, at Eleven of the Clock in the Night or thereabout, this Deponent lost Company with the aforesaid Capt. Scott (the Wind blowing very Hard on Shore) and was much afraid said Scott would drive on Shore, his Sloop being in a bad Condition, which this Deponent since believes was his Fate,

¹⁴ Elizabeth Donnan, op. cit., III, 135-136, and George C. Mason, op. cit., p. 317.

¹⁵ Redwood Letter-Book, no. 644, p. 33, cited by Donnan, op. cit., III, 136, n. 2.

the Weather after said two Sloops parted, proved very Bad several Days, And further this Deponent saith not.¹⁶

¹⁶ Rhode Island Public Notary Records, Vol. 5, pp. 203-204. The reason for Wickham's making his deposition at this time was that George Scott was long since given up as lost at sea and his wife, Mary Neargrass Scott, was being courted by a wealthy (according to the *Boston News-Letter* of 16 November 1732 Brenton had inherited some £100,000 from an uncle) widower, the sheriff, Jahleel Brenton, whom she wished to marry. His former wife, who had borne him fifteen children, was Frances, daughter of Governor Samuel Cranston (see George Champlin Mason, *Reminiscences of Newport* [Newport: Charles E. Hammett, Jr., 1884], p. 368). Once the deposition of Wickham had been made, Scott's widow married Brenton in 1744 and bore him seven children (see George Champlin Mason, loc. cit., and Mrs. John King Van Rensselaer, *Newport Our Social Capital* [Philadelphia and London: J. B. Lippincott Co., 1905], p. 135).

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Ships that Tested the Blockade of the Gulf Ports, 1861-1865

BY MARCUS W. PRICE

Part IV

IV. DURING CALENDAR YEAR 1864

SHIPS THAT TESTED THE BLOCKADE

229

NAME OF VESSEL	Type	Tons	Crew	Place and Date Captured, Lost, or Destroyed	Bound for or from Gulf Port	Known Successful Runs During Year
<i>Advance</i>	schooner			captured off Velasco Pass, 3 May	from	1
<i>Agnes</i>	schooner			captured off San Luis Pass, 7 Dec.		2
<i>Alabama</i>	schooner			captured lat. 27° N., long. 91° W., 31 Oct.	from	
<i>Albert Edward [Uncle Bill]</i>	schooner			captured lat. 20° 50' N., 85° 42' W., 10 Sept.	from	9
<i>Alice [Matagorda]</i>	steamer	616 50/95	22	captured off coast of Texas, 19 Apr.	for	
<i>Alma</i>	schooner			captured Espiritu Santo Pass, 14 May	for	
<i>Amanda</i>	schooner	60 (approx.)*				1
<i>Anna Gibson</i>	schooner					1
<i>Anna Shepard</i>	schooner			captured Alligator River, Fla., 12 May	from	
<i>Ann C. Davenport</i>	schooner					1
<i>Ann Gillerson</i>	schooner					
<i>Annie Verden [or Virden]</i>	schooner					
<i>Ann Louisa</i>	schooner		6	captured about 60 miles to southward of Velasco, 5 Oct.	from	2
<i>Austin [Donegal]</i>	steamer			captured lat. 26° 30' N., long. 89° 30' W., 6 Sept.	for	
<i>Budger</i>	schooner	603 80/95	23	captured off Mobile, 6 June	for	7
<i>Belle</i>	schooner	13 85/95		captured entrance to St. George's Sound, Fla., 6 Nov.	from	3
		46	7	captured Galveston, 27 Dec., by boat expedition. In harbor		5
<i>Camilla</i>	schooner			captured inside Galveston Island, 29 Feb.		2
<i>Caroline [Rosita, Union]</i>	steamer			burned off Galveston, 7 July	from	1
<i>Caroline</i>	steamer	164 74/95		captured in Gulf of Mexico	for	3
<i>Carrie Hath</i>	schooner					1
<i>Carrie Muir</i>	schooner			captured off Pass Cavallo, 30 Nov.		
<i>Cassie Holt</i>	sloop			destroyed San Luis Pass, 29 Feb.	from	
<i>Cecilia</i>	schooner	54*				1

SHIPS THAT TESTED THE BLOCKADE

NAME OF VESSEL	Type	Tons	Crew	Place and Date Captured, Lost, or Destroyed	Bound for or from Gulf Port	Known Successful Runs During Year
<i>Charles Russell</i>	schooner					3
<i>Clifton</i>	schooner			grounded on bar off Sabine Pass, burned by own crew, 21 Mar.	from	
<i>Clipper</i>	schooner	47.50*	7	captured off Galveston, 19 Dec.	from	1
<i>Cora</i>	schooner			captured off Velasco, 28 Oct.	for	3
<i>Cora Smyser</i>	schooner	700*		captured lat. 29° 40' N., long. 87° 30' W., 5 Feb.	for	
<i>Cumberland</i>	steamer	162*				19
<i>Denbigh</i>	steamer	71.50	8	captured about 25 miles S. by W. of Galveston, 4 Apr.	from	1
<i>Dodge [Mary Sorley]</i>	schooner	603 80/95	23			1
<i>Donagal [Austin]</i>	steamer			captured off Mobile, 16 Jan.	for	
<i>Eliza Catherine</i>	schooner			beached and captured near San Luis Pass, 19 Oct.	from	1
<i>Ellen</i>	schooner					
<i>Emily</i>	schooner					
<i>Enna</i>	steamer (wood burner)					
<i>Etta</i>	schooner			captured near Charlotte Harbor, Fla., 9 June		
<i>Experiment</i>	schooner			destroyed near Cedar Keys, Fla., about 30 Mar.		
<i>Fanny</i>	schooner			captured off Galveston, 3 May		
<i>Fiery Brass</i>	schooner			captured off Velasco, 19 Apr.	from	2
<i>Flash</i>	schooner		4	captured lat. 23° 24' N., long. 97° 24' W., 27 Nov.	from	2
<i>Florida</i>	sloop			captured at sea, 20 Mar.	for	
<i>Florida</i>	schooner	37 70/95*				1
<i>Flushing [Nim Nan, Little Lila, Little Lily]</i>	steamer	230 04/95*		destroyed Suwanee River, 2 Feb.	from	3
<i>Fordene 2</i>	schooner					1
<i>Frances [Marian, Zephine]</i>	steamer	679*				3
<i>Francisca</i>	sloop			captured off Brazos River, 3 May	from	3
<i>Frederic the Second</i>	schooner			captured Chasowitzka River, 28 May		1
<i>General Finnegan</i>	sloop					
<i>Georgia</i>	schooner			captured off Brazos Santiago, 4 Dec.	for	
<i>Geriena Hilligonda</i>	brig	150 (approx.)*		beached by own crew and burned by U. S. Navy, lat. 28° 31' N., long. 83° 10' W., 18 Apr.	for	
<i>Good Hope</i>	schooner					
<i>Governor of Jamaica</i>	schooner					1
<i>Harriet Lane [Lavinia]</i>	steamer	660*				1
<i>Hector</i>	schooner					
<i>Henrietta</i>	sloop		3	captured off Bayport, Fla., 1 July	from	
<i>Henry F. Colthirst [or Col. Colthirst]</i>	schooner			captured off San Luis Pass, 20 Feb.	for	
<i>Independence</i>	schooner					

SHIPS THAT TESTED THE BLOCKADE

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Ship	Owner	Year	Where	When	How	Where	When	How
Harriet Lane [Lavinia]	Harriet Lane	1860*	captured off Bayport, Fla., 1 July	3	from			
Hector	Hector		captured off San Luis Pass, 20 Feb.		for			
Henrietta	Henrietta		captured off Galveston, 28 May		for			
Henry F. Colthirst [for Col- thirst]	Henry F. Colthirst		chased ashore and destroyed off Mobile, 4 July		for			
Independence	Independence		captured off Galveston, 12 July		for			
Isabel	Isabel	287*	captured 7 miles off Velasco, 11 Sept.		from			
Ivanhoe	Ivanhoe		captured lat. 26° N., long. 96° W., 5 Nov.		for			
James Williams	James Williams		captured off Velasco, 29 Feb.		from			
J. C. Guin	J. C. Guin							
Jeannette	Jeannette							
John	John							
John A. Hazard	John A. Hazard							
John Douglass [Lilly]	John Douglass							
John Dryden	John Dryden							
John Scott [Victoria]	John Scott							
Josephine [Kate Dale]	Josephine							
Juanita	Juanita							
Judson	Judson	16 28/95*	captured lat. 29° 28' N., long. 89° 48' W., 7 January		from			
Julia	Julia		captured in Sarasota Sound, 24 Mar.		from			
Julia A. Hodges	Julia A. Hodges		captured off San Luis Pass, 11 Apr. Run aground and		from			
Kate Dale [Josephine]	Kate Dale		lost by prize crew		from			
Lady Hurley	Lady Hurley		captured off Mobile Bar, 30 Apr.		for			
Laura	Laura		captured 43 miles off Velasco, 5 Dec.		for			
Laura	Laura		captured Matagorda Bay, 6 Apr.		for			
Lealand	Lealand							
Lilly [John Douglass]	Lilly	39 30/95	captured off Velasco, 6 Dec.		for			
Lilly	Lilly		captured Ocklocknee River, 18 Jan.		for			
Little Carrie	Little Carrie		captured off Velasco, 21 Apr.		for			
Little Lila [Flushing, Nan Nan, Little Lilly]	Little Lila		captured at sea, 11 Mar.		from			
Lone	Lone		captured off Velasco, 17 Apr.		for			
Louisa	Louisa	40*	captured off Brazos Pass, 6 Nov.		for			
Louisa	Louisa	85 (approx.)	captured off Brazos Pass, 11 Feb.		for			
Louisa	Louisa		captured off San Luis Pass, 15 Oct.		for			
Louisa	Louisa		captured near Aransas Pass, 12 Oct.					
Lowood	Lowood		captured Bar of St. Bernard, 24 Nov.					
Lucy	Lucy		captured near Velasco, 4 Dec.		from			
Luna	Luna	163*	captured lat. 28° 20' N., long. 82° 55' W., 21 Oct.		for			
Ma del Pilar	Ma del Pilar							
Mail [Susana]	Mail	344*	captured off Campeche Banks, 27 Nov.		from			
Mandoline	Mandoline		captured Atchafalaya Bay, 13 Apr.		from			
Marguerita	Marguerita							
Maria	Maria	406*						

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NAME OF VESSEL.	Type	Tons	Crew	Place and Date Captured, Lost, or Destroyed	Bound for or from Gulf Port	Known Successful Runs During Year
<i>Maria Alfred</i>	schooner					
<i>Marian [Frances, Zephine]</i>	steamer	679*		captured lat. 28° 50' N., long. 95° 05' W., 13 Apr.	for	
<i>Marion</i>	schooner			captured off Rio Brazos, 12 Mar. Unseaworthy; sunk by U. S. Navy	for	5
<i>Mary</i>	steamer	279*		destroyed off Pass Cavallo, 8 Dec.	from	
<i>Mary Ann</i>	sloop			captured inside San Luis Pass, 15 Feb.		5
<i>Mary Douglas</i>	schooner					2
<i>Mary Elizabeth</i>	schooner	6*				
<i>Mary Jane</i>	sloop					
<i>Mary Sorley</i> [formerly U. S. Revenue Cutter <i>Dodge</i>]	schooner	71.50	8			1
<i>Mary Virginia</i>	steamer	103*		destroyed off coast of Texas, 8 July	from	
<i>Matagorda [Alice]</i>	steamer	616 50/95	22	captured Sarasota Pass, 13 Jan.		2
<i>Matagorda</i>	steamer			captured Pascagoula Bar, 8 Dec. Had pass from Farra-		
<i>Mayflower</i>	schooner			gut	for	
<i>Medora</i>	schooner		7	captured lat. 25° 25' N., long. 84° 30' W., 29 Apr.	from	
<i>Miriam</i>	schooner			captured Gulf of Mexico, 10 Dec.	for	
<i>Morris</i>	schooner			captured lat. 28° 50' N., long. 95° 05' W., 11 Mar.		
<i>M. P. Burton</i>	steamer			captured Tampa Bay, 6 May	from	
<i>Nan Nan</i> [Flushing, <i>Little Lila</i> , <i>Little Lily</i>]	sloop	230 04/95		captured off Brazos Santiago, 19 Nov.		1
<i>Neptune</i>	schooner			captured coast of Florida, 27 Apr.	for	2
<i>Neptune</i>	schooner			captured Biloxi Bay, 24 Aug.	for	
<i>Nettie</i>	schooner	6*		captured lat. 26° 05' N., long. 83° 20' W., 1 May	for	
<i>O. K.</i>	schooner			captured off Velasco, 27 Oct.		
<i>Oregon</i>	sloop					7
<i>Oscar</i>	schooner	20*		captured lat. 28° N., long. 83° 10' W., 6 Dec.	for	
<i>Panchar Larispa</i>	sloop			captured off San Luis Pass, 6 Mar.		
<i>Phantom</i>	sloop					1
<i>Pickwick</i>	sloop					1
<i>Randall</i>	sloop					1
<i>Red Gauntlet</i>	steamer	25*				1
<i>Retriever</i>	schooner	60 (approx.)		captured lat. 26° 23' N., long. 83° 59' W., 7 Jan.	for	
<i>Rob Roy</i>	schooner			chased ashore and burned San Luis Pass, 13 Apr.	for	
<i>Rochuck</i>	schooner					
<i>Roxbia</i> [Acanthaceae, <i>Funaria</i>]	steamer	163 24/95		captured in Gulf, 22 May; recaptured by crew and returned to Velasco, 29 Feb.	from	1

SHIPS THAT TESTED THE BLOCKADE

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Retriever	schooner	25*			
Rob Roy	schooner	60 (approx.)			
Roeback	sloop				
Rosina	schooner				
Sandwich Islander	schooner				
Starline	schooner				
Stargory	steamer				
Susana [Mail]	schonnet	311*			
Syphide	schoonet	35			
Telegraph	schoonet				
Terra Brass	schoonet				
Theodora	sloop				
Thisle	schoonet				
Three Brothers	schoonet	39 58/95			
Tip Top	schoonet				
Tiron	steamet				
Toobras	schoonet				
Uncle Bill [Albert Edward]	schoonet				
Union [Rosita, Caroline]	steamet				
Victoria [John Scott]	schoonet	161 71/95			
Firgin	steamet				
Wasp	schoonet				
Watchful	schoonet				
Wave	steamet				
Wild Pigeon	schoonet	37*			
William	schoonet				
William A. Kain	schoonet				
William Douglas	schoonet				
Winkee Doodle	sloop				

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Vessels engaged in the business:

Vessel engaged in the same number of runs attempted.

Successful runs:

Successful runs:

Percentage of successful runs:

steamers	25,	sailing vessels	119,	total	144
steamers	100,	sailing vessels	173,	total	273
steamers	87,	sailing vessels	91,	total	178
steamers	13,	sailing vessels	82,	total	95
steamers	87 ⁶⁶ %,	sailing vessels	53 ⁹¹ %,	all types	65 ⁹⁷ %

V. FROM JANUARY 1 THROUGH JUNE 4, 1865

NAME OF VESSEL	Type	Tons	Crew	Place and Date Captured, Lost, or Destroyed	Bound for or from Gulf Port	Known Successful Runs During Year
<i>Anna Dale</i>	schooner					
<i>Anna Sophia</i> [<i>Annie Sophia</i>]	schooner			captured Pass Cavallo, 18 Feb.		
<i>Annie</i>	sloop		2	captured in Galveston Harbor, 7 Feb. captured off Crystal River, Fla., 11 Apr. Destroyed after cargo removed	from	
<i>Annie Sophia</i> [<i>Anna Sophia</i>]	schooner				for	
<i>Augusta</i>	schooner	55*		captured off Cedar Keys, 17 Jan.		4
<i>Badger</i>	steamer	375*	6			2
<i>Banshee</i>	steamer					1
<i>Ben Willis</i>	schooner			captured lat. 28° 15' N., long. 92° 00' W., 2 Feb.	from	2
<i>Charles Russell</i>	schooner					1
<i>Comus</i>	schooner		12	captured lat. 23° 50' N., long. 83° 41' W., 31 Mar. captured 13 miles E. by S. of Brazos Santiago captured off Bayport, Fla., 17 Feb.	from from for	
<i>Gora</i>	steamer			captured Calcasieu Pass, La., 22 Jan.	from	
<i>Delphia</i>	schooner	162*		ran aground off Galveston, shelled, boarded, and burned, 24 May	from	7
<i>Delphigh</i>	steamer			captured off Galveston, 21 Apr.	from	1
<i>Chaos</i>	schooner	63				2
<i>Col. Lamb</i>	steamer					
<i>Eco</i>	hermaphrodite brig			captured off Galveston, 19 Feb.	for	
<i>Ella</i>	schooner					1
<i>Evelyn</i>	steamer					2
<i>Fannie McRae</i>	schooner			captured off Cedar Keys, Fla., 23 Jan.	for	
<i>Flamingo</i>	steamer					
<i>Florida</i>	sloop			captured off Crystal River, Fla., 11 Apr. Destroyed after cargo removed	from	2
<i>Foam</i> [<i>Owl</i>]	steamer					
<i>Fox</i>	steamer					2
<i>Frances</i> [<i>Marian, Zephine</i>]	steamer	679*				2
<i>Francisca</i>	sloop					1
<i>George Burkhart</i>	schooner					
<i>George Douthwaite</i>	bark			captured lat. 26° N., long. 96° W., 17 Mar. captured off the Warrior River, Fla., 8 May	from for	
<i>Granite City</i> [<i>Three Marys</i>] [formerly of U. S. Navy, captured by Confederates 6 May 1864]	steamer	327				

SHIPS THAT TESTED THE BLOCKADE

235

Ship Name	Type	Value	Notes	Disposition
<i>George Downstate</i>	steamer	327	captured off the Warrior River, Fla., 8 May	for
<i>Granite City</i> [Three Marys]	for- steamer		merly of U. S. Navy, captured by Confederates 6 May 1864]	
<i>Imogene</i>	steamer	502		
<i>Lark</i>	steamer			
<i>Laura</i>	steamer			
<i>Lilly</i>	schooner			
<i>Lizzie</i>	steamer			
<i>Louisa</i>	schooner			
<i>Luna</i>	steamer			
<i>Malta</i>	schooner	406*		from
<i>Maria</i>	steamer	679*		
<i>Marian</i> [Frances, Zephine]	steamer			
<i>Mary Agnes</i>	schooner	173*		for
<i>Mary Ellen</i>	schooner			for
<i>Matilda</i>	schooner			
<i>Owl</i> [Foam]	steamer			
<i>Pelican</i>	steamer			
<i>Pet</i>	schooner			
<i>Phantom</i>	sloop	20 (approx.)*		3
<i>Pharmigan</i>	steamer			
<i>R. H. Vermilyea</i>	schooner	610 (approx.)		
<i>Rob Roy</i>	schooner			
<i>Ruby</i>	steamer			
<i>Sonora</i> [possibly Jeannette, Formerly U. S. steamer So- nora in trade between New Orleans and Tampico; cap- tured by Confederates]	steamer	25,900/95		
<i>Sort</i>	schooner			
<i>Telegraph</i>	schooner			
<i>Telemeico</i>	sloop	14		
<i>Three Marys</i> [Granite City]	steamer	327		30
<i>Tip Top</i>	schooner			
<i>Wave</i> [former U. S. tinclad cap- tured by Confederates 6 May 1864 in Calcasieu Bayou, Lou- isiana]	steamer			
<i>Will o' the Wisp</i>	steamer	800		
<i>Wren</i>	steamer	679*		
<i>Zephine</i> [Frances, Marian]	steamer			

Summary for 1865:

Vessels engaged in the business:	steamers 25,	sailing vessels 33,	total 58
Number of runs attempted:	steamers 69,	sailing vessels 39,	total 108
Successful runs:	steamers 65,	sailing vessels 11,	total 76
Unsuccessful runs:	steamers 4,	sailing vessels 28,	total 32
Percentage of successful runs:	steamers 94 ⁶ / ₁₀ , sailing vessels 28 ⁶ / ₁₀ , all types 70 ⁶ / ₁₀		

Overall Summary, 1861-1865:

Vessels engaged in the business:	steamers 156,	others, including unascertained types, 987,	total 1143
Number of runs attempted:	steamers 711,	others, including unascertained types, 2249,	total 2960
Successful runs:	steamers 646,	others, including unascertained types, 1817,	total 2463
Unsuccessful runs:	steamers 65,	others, including unascertained types, 430,	total 495
Percentage of successful runs:	steamers 91 ⁶ / ₁₀ , others, including unascertained types, 81 ⁶ / ₁₀ , all types 83 ⁶ / ₁₀		

(It will be noted that this overall summary does not show the actual number of vessels engaged in the trade, since it contains the totals for the five separate years and, frequently, vessels ran during more than one year.)

The cited authority, *Compilation of Laws and Decisions of the Courts Relating to War Claims*, contains a tabular list of vessels captured, lost, or destroyed in the Gulf while endeavoring to run the blockade. Excluding fishing boats, rafts, and rowboats, the following numbers and types of unnamed blockade runners are listed by years:

1861: 3 schooners—1 wrecked, 1 burned, and 1 captured

1862: 4 schooners—1 chased ashore, 1 burned, and 2 captured

1863: 2 steamers—(1 chased ashore and 1 captured), 10 schooners (2 burned and 8 captured), and 3 sloops (1 destroyed and 2 captured).

1864: 6 schooners—(1 chased ashore, 1 destroyed, and 4 captured).

It is possible that some or all of the unnamed vessels so listed were not accounted for by the other authorities cited, hence their inclusion here.

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 - (b) *Index 88 of Parties who exported cotton from Charleston, Georgetown, Wilmington, Savannah, Apalachicola, St. Marks, Florida, Mobile, Galveston, Sabine, Texas, Eagle Pass, Texas, New Orleans.*
- III. *Records of the Department of Commerce (U. S.) in the National Archives, Record Group No. 41:*
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4. *Mobile Advertiser and Register* (*Mobile Daily Advertiser and Register*), Mobile, Ala., September 1862 through December 1864. (A few numbers missing.)
5. *The Weekly Mail* (*Montgomery Daily Mail*), Montgomery, Ala., April 1861 through September 1864. (Many issues missing.)
6. *Mercantile Weekly Report*, Habana, Cuba, 1862. (A few scattered issues only.)
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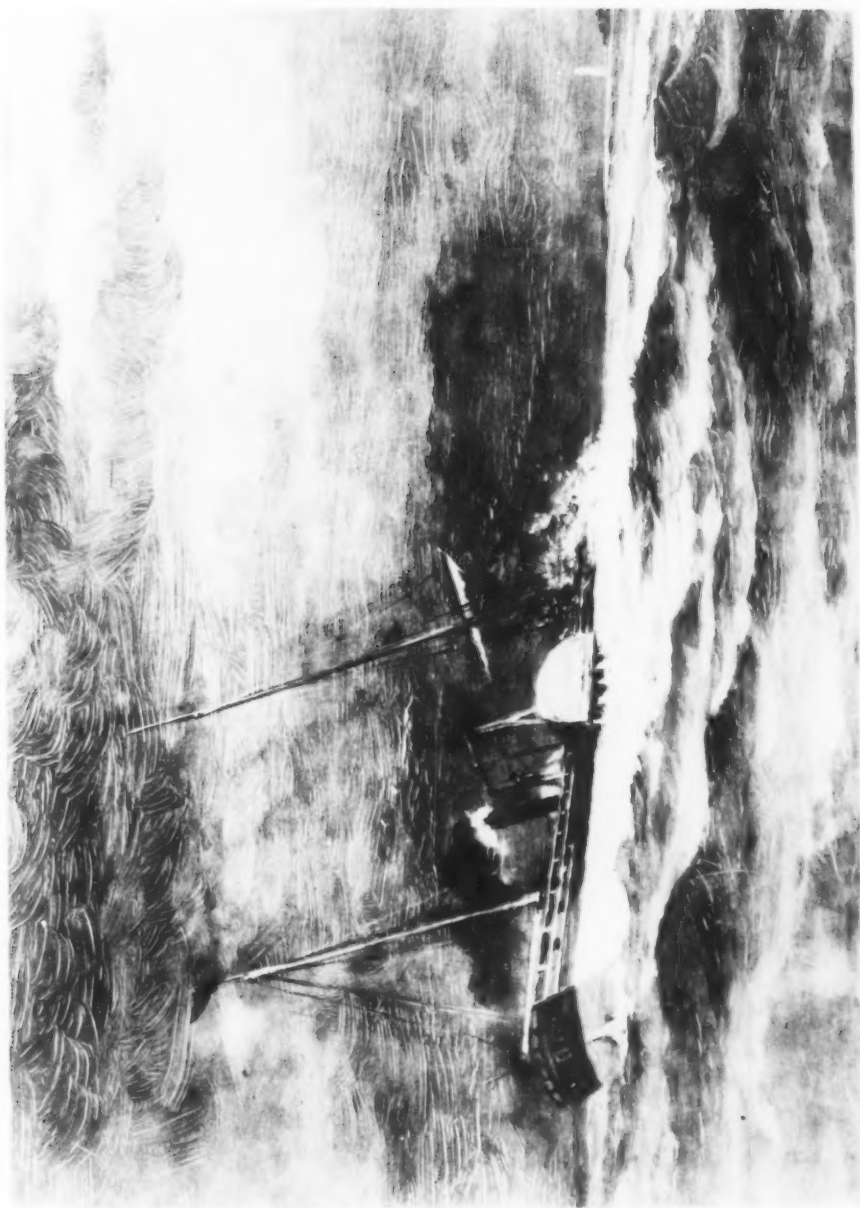
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THE END

Marcus W. Price, a native of South Carolina and an attorney by training, is director of photographic research in The National Archives. He first became interested in the Civil War blockade through its legal aspects, and has been a frequent contributor to THE NEPTUNE on this phase of naval history.



Steamer *Phoenix*, Captain Robert L. Stevens, in a storm off Barnegat Inlet, 1809



Steamer Phoenix
Courtesy of The Mariners' Museum, Newport News, Virginia



Notes

COLONEL JOHN STEVENS

In the various accounts of experiments in developing the steamboat little reference is found to the important contributions made by Col. John Stevens. He followed with interest the attempts of Morey, Fitch, and others, and in 1801-1802 built two boats fitted with propellers of the windmill type as described in the patent granted to Joseph Braman in 1785. Those wheels had vanes attached to spokes but were inefficient, and as is true of any single-screw drive, tended to turn the boats in a circle.

In 1804 he built *Little Juliana* (Plate 20), 68 feet long, fitted her with a water-tube boiler, twin, true-screw propellers driven by a single-cylinder engine through gears and demonstrated her successfully on the Hudson River. In 1811 the Colonel's sons fitted new propellers, copies of the original, and entered *Little Juliana* in a marine parade on the river. This machinery may be seen today in the Smithsonian Institute. As the principle of the true-screw was first recognized by Colonel Stevens he must stand as the inventor of it.

In 1808 the Colonel built *Phoenix* (Plates 21, 22) with a length of 100 feet and side wheels driven by a single-cylinder engine of the Steeple-beam type and a water-tube boiler. Before her completion, Fulton and Livingston had obtained a franchise from the State of New York giving them a monopoly of its waters for steamboat navigation. As close personal friends of Stevens they invited him to join them, but he declined because of an agreement he had made with Nicholas Roosevelt.

The Delaware River was without restrictions and in June 1809 *Phoenix* started for Philadelphia under com-

mand of Robert Livingston Stevens, second son of the Colonel, with Moses Rogers as first mate. Off Barnegat Inlet a storm was encountered and refuge was taken in the bay until the weather improved. This was the first ocean voyage of a steamboat as well as the first with a water-tube boiler. The first scheduled trip of *Phoenix* on the Delaware was made between Philadelphia and Trenton on 5 July 1809 with forty passengers.

STANTON M. SMITH

HALF MODEL OF *America*

Editor's Note: The Editors of THE AMERICAN NEPTUNE are in receipt of the following communication from Sydney A. Vincent, naval architect of the Newport News Shipbuilding and Dry Dock Company, in commenting on the article, 'A Contemporary Half-Model of the Yacht *America*,' XI (1951), 245-250.

... I noted one thing that surprised me. In explaining the variations in dimensions you suggest the possibility of one model [of *America*] being based on the outside of the framing instead of the outside of the planking. As you well know, modern wooden craft are, today, built to lolled lines to the outside of the planking and steel ships to the framing. Today the model of a wooden ship is primarily for the naval architect's use in deciding upon the hull form. Even for steel ships Theodore E. Ferris would have a model made from his preliminary lines plan. He then rubbed his hands over the model and also squinted at it with one eye, had the model altered here and there, and then drew his final lines plan.

As to offsets lifted from a vessel in dry-dock, they are usually approximate at best and that is an understatement unless done unhurriedly by technical men with the aid of surveyors, transits and levels and other semi-mechanical equipment. Even measuring the length overall is not simple. Plumb bobs swing in the wind and the keel blocks below, or spars, deck houses, etc., topside, made a

truly straight horizontal measurement difficult without instruments.

Also a wooden vessel expands unequally after launching and this combined with the usual forcing of unfair framing and fairing the planking results in the vessel differing appreciably from the original designer's model and lines plan.

Summing this, I would not expect better agreement between the several sources of data on *America's* hull form, or for modern vessels either. In fact, I am surprised at how well they all agree. Even today steel ships tend to be smaller when welded, due to shrinkage as the weld metal cools in the joints, and similarly riveted vessels tend to be larger than designed. The topsides are usually welded last today and the resultant contraction tends to cause the ends of keel to lift off the keel blocks. We now take steps to minimize such things. I suppose that if such a vessel's lines were lifted years from now, men might comment on the model not agreeing with the ship.

SYDNEY A. VINCENT

FISHING CRAFT OF MANFREDONIA

MANFREDONIA is an isolated seaport town on the Adriatic Coast of Italy just below the Gargano Peninsula. During the winter of 1944 I had the opportunity of visiting the town and of studying the local fishing craft (Plates 23, 24). There must have been a hundred similar craft drawn up on the beaches—double-ended, lateen-rigged, shallow-draft boats, ranging in length from 25 to 35 feet, in beam 6 to 8 feet, and in height about 4 feet at the bow and 2 feet at the stern.

Hull. Smooth sided, built of cherry (garboard and below waterline) and pine (above waterline). Sharply flaring bow and stern. Stern post brought up 6 to 8 inches above forward rail. Small pieces filling area between stem and rail. Bitts, single, on either side of bow. Straight keel, both heel and foot rounded. Outboard rudder, trapezoidal, hung by gudgeons and pintles. Tiller de-

mountable; rudder laid athwart stern when moored. Decked fore and aft, with well, or cockpit, amidships. Both decks cambered slightly, with rails. Frames of rails neatly covered over. Wooden traveler, slightly arched, fitted in V of bow and stern, that of stern the longer. After deck partitioned to form a box for nets. Small cockpit for steersman.

Finish. Painted. Red below waterline. Commonly white topsides with green, blue, or red rail. Decks painted green, red, or yellow. Black circles, approximately 10 inches diameter, painted on either bow (traditional eye). Registration number on either bow, name on stern.

Rig. Single lateen. Mast, approximately 10 to 15 feet high, stepped in break of cockpit, heel fitting into circular hole. Iron strap, hinged and locked with peg, fastening mast to aft edge of forward deck; wedges driven in to hold mast fast. Sheave in top of mast for halliard, which has lower block made fast to heel of mast. Yard parallel to mast by line looping mast, passing through a heart and down to deck. Two or sometimes four shrouds, set up by block and fall (four-part) or laniard reeved between hearts. Shrouds either spliced around block or bent and seized. Lower block has heart at bottom, laniard reeves through to a hook passed through chain plate, a flattened loop of iron.

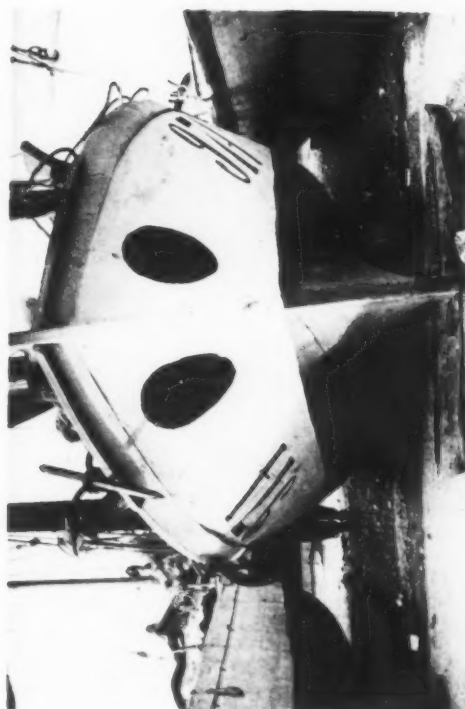
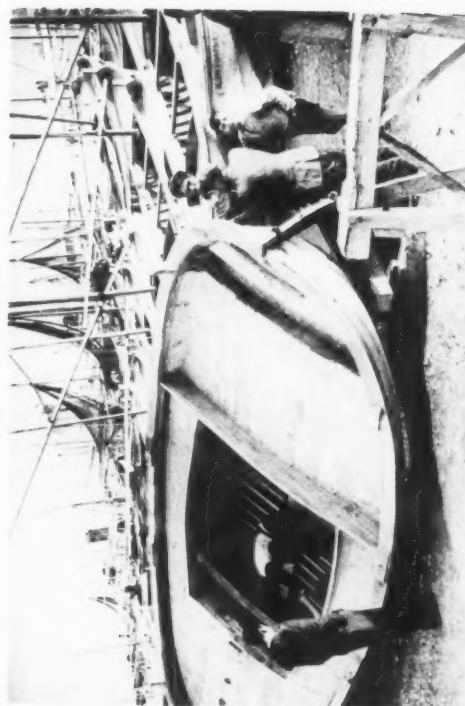
Oars. Unusually long, with greatest diameter at upper end. Four single thole pins, staggered port and starboard.

Anchor. Four-pronged grapple.

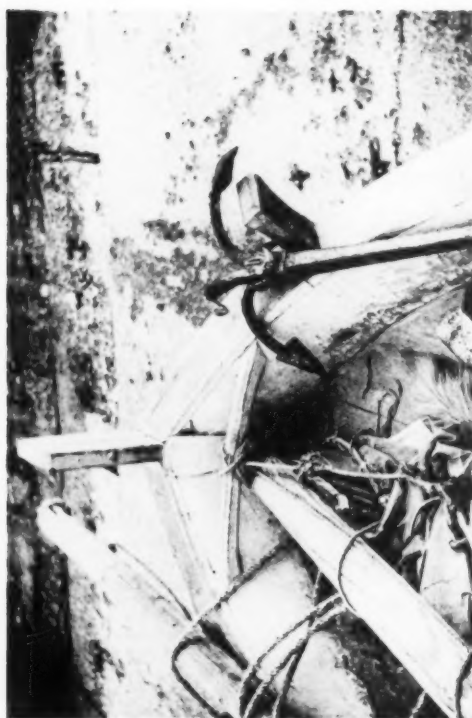
Purpose. Fishing with nets approximately 110 feet long and 15 feet wide. Beam attached to one end, presumably trawled. Fisherman told me that each craft took 20 nets.

Cost. Owner of boat photographed told me that he paid 5,000 lire for his boat complete in 1941; value estimated to be 50,000 lire in 1944 (at Allied Military Government exchange, \$500).

BEAUMONT NEWHALL



Manfredonia fishing boats
Photographs by Beatrice Newhall



Detail views of Manfredonia fishing boats
Photographed by Giovanni Sestini



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BY ROBERT GREENHALGH ALBION

THESE lists, from now on, will include articles from all publications except THE AMERICAN NEPTUNE itself.

Abbreviations: *USNIP*, *United States Naval Institute Proceedings*; *S&S*, *Ships and Sailing* (after June 1952, renamed *Ships and the Sea*).

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- HOLMAN, GORDON, *Carlsen of the Flying Enterprise*, 36 pp.; paper, 2s 6d; London, Hodder. Includes 76 photographs of sinking liner, with attempted tow. See also 'The Big Tow' in *S&S*, April, on same subject.
- HOBBS, W. H., *A Proposed Open-ditch and Tunnel Sea-level Canal across Honduras*, 10 pp.; Ann Arbor, Edwards Bros. Illustrated pamphlet.
- JAMISON, J. W., USN. Medical Service in Amphibious Operations, 9 pp.; *USNIP*, Jan.
- KAY, H. N., USN. The Navy's Scientific Wonderland, 10 pp.; *USNIP*, April. Naval Ordnance Laboratory, White Oak, Md.
- LETHBRIDGE, T. C., *Boats and Boatmen*, 199 pp.; \$3.50; N. Y., Thames & Hudson. One of the 'Past in the Present' series; discussion of early craft from viewpoint of 'archaeological anthropologist,' with subject matter chiefly English and Western European.
- Lloyds of London, 6 pp.; *Lykes Fleet Flashes*, March.
- MCDONALD, E. A., USN. Icebergs are Tough Customers, 8 pp.; *S&S*, Feb. Experiences of Navy ice-breakers.

- POWELL, L. H., Clearing the Fairways after the War, 7 pp.: S&S, Feb. Salvage or removal of submerged vessels.
- RADFORD, J., RNR, Cinderella Service, 3 pp.: *Trident*, Feb. English dredgers at Southampton, by a Trinity House pilot.
- RYDELL, R. A., *Cape Horn to the Pacific: the Rise and Decline of an Ocean Highway*, 213 pp.: \$4.00; Berkeley, U. of Cal.
- SEHLICH, V. A., Seagoing Weathermen, 4 pp.: S&S, May. Atlantic Weather Observation Service, by Coast Guard, etc.
- TUNIS, EDWARD, *Oars, Sails and Steam: A Picture Book of Ships*, 80 pp.: \$3.50; Cleveland, World Pub. Co. Drawings and brief notes on various types of vessels down through the centuries.
- UHLINGER, C. W., comp., A Bibliography on the Regulation and Promotion of American Shipping by the United States Government, 4 pp.: *Maritima* (N. Y. Maritime College), Feb. See 'Addenda' below for his Labor bibliography.
- WOLFE, G. O., Rescue in the North Atlantic, 6 pp.: S&S, Jan. Rescue of crew of sinking *Antinoe* by President Roosevelt, 1926.
- Last Watch on the *Titanic*, 6 pp.; *ibid.*, April.

II. Exploration, Navigation, Cartography

- CRAIG, HARDIN, JR., Peter Puget: An Active and Zealous Officer, 19 pp.: *Mariner's Mirror*, Feb.
- FORD, N. D., The Mimosa makes her Landfall, 3 pp.: S&S, March. Wartime navigation, approaching Newfoundland.
- FRISTRUP, BORGE, Danish Expedition to Peary Land, 1947-1950, 11 pp.: *Geog. Rev.*, Jan. Same, by Count Eigil Knuth, in *Geog. Journal*, March.
- HELMES, SIR MAURICE, Captain Cook, R.N., F.R.S. A Bibliographical Excursion, 50s; London, Francis Edwards. 'A bibliography for collectors, compiled and written by the owner of the best Cook collection in private hands.' Amplification of his 1936 Cook bibliography.
- ROBINSON, J. L., Changing the Arctic Maps, 5 pp.: *Beaver*, Dec. 1951, March 1952.
- VERHOGG, P., Columbus Landed on Caicos, October 12th, 1492, 14 pp.: *Tijdschr. Konik. Nederl. Aardrijkskundig Genootschap*, LXIX, No. 1. In Dutch, with summary in English.
- WAXELL, SVEN, *The American Expedition*, ed. M. A. Michael, 236 pp.: 15s; London, Hodge. Translation of account of Bering's second expedition by his Swedish second-in-command.

III. Merchant Sail and General Shipping—North America

- AHLERS, H. E., The Glorious *Gertrude L. Thebaud*, ; S&S, April. Celebrated Gloucester fishing schooner, 1930-1948, to loss at LaGuaira.
- BOWKER, F. E., South in the *Herbert L. Rawding*, ; *ibid.*, March. Coal cargo from Newport News to Guadeloupe in four-masted schooner, 1940.
- BRADFORD, GERSHOM, Flying under Canvas, 6 pp.; *ibid.*, May. Clipper records.
- BREWINGTON, M. V., *Baycraft Labels at Dorothy's Discovery*, 6 pp.: Cambridge, Md., The Author. Separate notes on six types of Chesapeake Bay craft (log canoe, bugeye, sloop, schooner, pungy, skipjack) with drawings by Louis Feuchter, reproduced on author's hand press.
- BUNKER, JOHN, New Morning Star Needed for South Pacific Mission Work, *Maine Coast Fisherman*, May. Summary of six successive *Morning Stars*, 1856 ff.
- The Chesapeake Bay Ram, 3 pp.; *Log Chips*, March. Special type of schooners, adapted to use on canals.
- CUTLER, C. C., *Five Hundred Sailing Records of American Built Ships*, 114 pp.: \$3.00 (free to members); Mystic, Marine Hist. Assn. Tables of passages on various runs.
- HEDGES, J. B., *The Browns of Providence Plantations: Colonial Years*, 379 pp.: \$6.00; Harvard. A Study in Economic History, published in coöperation with the Committee on Research in Economic History, Social Science, Research Council. First of three projected volumes. One of the most comprehensive analyses of early commercial and shipping methods.
- (MORRIS, CADWALLADER), Shipwrecked in the West Indies, 1764, ed. W. W. Comfort: *Pa. Mag. Hist. & Biog.*, Jan.
- THOBER, F. J., comp., Square-Riggers built in the United States since 1870, 4 pp.: *Log Chips*, March, ff. Alphabetical list by years; first installment through Benjamin Sewall, 1874.
- (WARE, E. R.), West African Trading Voyage: Diary of the Supercargo of the Brig *Northumberland* of Salem, in 1844, 9 pp. plus; *Yachting*, March, April, ff; to be continued.

IV. Merchant Sail and General Shipping—Other Regions

- CARR, F. G. C., *Sailing Barges*, 350 pp.; 30s; London? Peter Davies.
 CLARK, G. V., Hurricane at the Lacipedes; *Trident*, Feb. Loss of seven ships off northern coast of West Australia, 1876.
 LAIRD, DOROTHY, Logbooks of the *Archibald Russell*, 4 pp.; *Sea Breezes*, Jan. Two logs, 1929-1932, of Greenock-built bark under Finnish colors.
 Last Sailing Ship Taken Out of 'Lloyds Shipping Index,' 1 p.; *ibid.*
 WEEKS, G. W., JR., The Seaford Skiff, 2 pp.; *Yachting*, Feb.
 WHITE, J. C., Spritty Barge, 6 pp.; *S&S*, Jan. Type developed on Thames around 1800; 9 action photos.

IVa. Fishing, Whaling, Etc.

- Adventure and Marjorie Parker* are last two Dorymen Left; *Maine Coast Fisherman*, Feb.
 BLANK, J. S., To the Ice, 6 pp.; *S&S*, March. Newfoundland seal fishery.
 BUNKER, JOHN, Mutineers Gave Up after being Locked in Fo'castle Three Days, *Maine Coast Fisherman*, March. Recollections of Capt. John Mandly of New Bedford; mutiny on whaler *Margaret*, 1914.
 BURGESS, R. H., Menhaden, the Sea's Oil Wells, 4 pp.; *S&S*, Jan.
 Modern Whaling, 6 pp.; *Life*, March 24.
 SCATTERGOOD, L. W., The Northern Shrimp Fishery, 3 pp.; *Maine Coast Fisherman*, March. Development in New England since 1933.
 ——— and McKOWN, D. A., U. S. Lobster Consumption Rose 40 Million Lbs. in 25 Years; *ibid.*, April. Detailed statistical tables; analysis of various sources.
 TODD, MARGARET, Lookout Spotted Bish Orr's Dory through Swirling Snow; *ibid.*, April. Recollections of Bailey Island fishing career, 1890-1934.

V. Merchant Steam, Ocean and Tidewater

- BLANK, J. S., The Great White Fleet, 8 pp.; *S&S*, May. United Fruit.
 BROWN, A. C., The *John Randolph*, America's First Commercially Successful Iron Steamboat, 14 pp.; *Georgia Hist. Quar.*, March.
 CAREW, H., The *Dakota's* Comedy of Errors, 4 pp.; *ibid.*, May. Wreck of new transpacific liner in Tokyo Bay, 1907.
 CHAPMAN, W. E., I Remember the Old *Remembrance*, 6 pp.; *Sea Breezes*, Jan. British tramp voyages, 1911-1914; later, as collier in Dardanelles operations, 1915.
 COCHRANE, E. L., USN, Maritime Retrospect, 4 pp.; *Polaris* (King's Point), Winter 1951-1952. Summary of recent merchant marine policy by Chairman of Federal Maritime Board, also Maritime Administrator.
 COMBES, J., Yarmouth Tugs of the Past, 3 pp.; *Sea Breezes*, Jan.
 CUNNINGHAM, J. T., Moran is Everywhere, 10 pp.; *S&S*, April. Towing.
 GRANBERG, W. J., Cruising to the Top of the World, 10 pp.; *ibid.*, March. Alaska Steamship Co.
 GREENHALGH, T. B., Where the Trade Wind Blows, 2 pp.; *Trident*, March. Tanker in West Indies, 1948.
 HOWSER, V. A., New Boats from Old Ships, 3 pp.; *S&S*, May. Conversion of reserve C-4 into ore ship *Tom M. Girdler*.
 ISHERWOOD, J. H., Orient Liner *Orient*, 4 pp.; *Sea Breezes*, Jan. First steamer designed for Australian mail service; served 1879-1909.
 LINCOLN, FREEMAN, The Bulging House of Grace, 17 pp.; *Fortune*, April. Grace Line and other widespread activities of W. R. Grace & Co.
 OSGOOD, J. O., Flyers to the Hook. Account of New York-Sandy Hook boats, 3 pp.; *Steamboat Bill*, March.
 SHEPHERD, R. W., Tree Line Great Lakes Service, 2 pp.; *Steamboat Bill*, March.
 TAGGART, H. F., California Soldiers in the Philippines. From the Correspondence of Howard Middleton, 1898-1899, 35 pp.; *Cal. Hist. Soc. Quar.*, Dec. 1951, March 1952. Letters describe trans-Pacific voyage in steamer *City of Puebla* and contain notes on arrival and departure of transports at Manila.
 UHLINGER, C. W., see Section I.

- Union-Castle Mail Liners, 10 pp.; *Sea Breezes*, Jan. South African service by Union Line since 1857, Castle Line since 1872, united in 1900.
- WRIGHT, G. C., First with Steam on the North Atlantic, 2 pp.; *S&S*, March. Pioneer passage of *Savannah*, 1819.
- YARHAM, E. R., Royal Yachts, 2 pp.; *Trident*, Jan. Brief historical sketch.
- (See also Index to Maritime Periodicals in *Polaris* [King's Point], Winter 1951-1952, under headings of Cargo Ships, Ore Carriers, Passenger Ships, Passenger-Cargo Ships, Refrigerated Ships, Shipping, Shipping Companies, Superliners, Supertankers, Tankers, Towboats, Tugs.)

VI. Inland Waters

- BASCOM, J. H., C. S. L. Fleet; *Detroit Marine Historian*, Feb., March, ff. Opening installments of list of ships of Canada Steamship Lines.
- BOWEN, D. T., Historic Shipwrecks of the Great Lakes, 11 pp.; *Inland Seas*, Spring.
- COX, CALEB, New Orleans to St. Louis and Return, 1819; A lovelorn traveler on an early steamboat, 24 pp.; *Bull. Missouri Hist. Soc.*, Jan. Annotations by Mrs. D. O. Jensen. Upstream trip in steamer *Alabama*, leaving New Orleans 16 Aug. 1819 and arriving in St. Louis 86 days later. Downstream trip in steamer *St. Louis*, arriving on 25 Feb. 1820 after 11-day run.
- DORSEY, H. W., Waters Astern, 9 pp.; *ibid.* Episodes of lake steamship life.
- DUNCAN, FRANCIS, The Story of the D & C, 17 pp.; *ibid.*, Winter 1951, Spring 1952. Detroit & Cleveland Steam Navigation Co., 1868 ff; to be continued.
- EMBERG, R. A., Alexander McDougall: Man with a Mission, 7 pp.; *S&S*, Jan. Inventor of Great Lakes whaleback 'pig,' 1888-1890.
- FOX, W. S., Wreck of the Steamer *Simcoe*; *Inland Seas*, Spring. Loss of steamer in Lake Michigan, 19 Nov. 1880.
- GOVAN, G. E., and LIVINGOOD, J. W., *The Chattanooga Country, 1540-1951: From Tomahawks to TVA*, 509 pp.; \$5.00; N. Y., Dutton, Esp. Ch. 7, 'River and Rail.'
- GRIEVE, PETER, *The Wilderness Voyage*, ; 15s; London, Cape. Amazon, from Brazil to Bolivia.
- HULT, R. E., *Steamboats in the Timber*, 209 pp.; \$4.00; Caldwell, Idaho. Detailed information on early steamboating in Coeur d'Alene region.
- JONES, H. D., Life on London's Canal, 5 pp.; *Geographical Mag.*, March.
- LLEWELLYN, BERNARD, Life on Chinese Waterways, 5 pp.; *ibid.*
- NEWELL, G. R., Sternwheelers North, 5 pp.; *S&S*, Feb. Experiences on Yukon during gold rush.
- ODLE, T. D., The American Grain Trade of the Great Lakes, 1825-1873, 18 pp.; *Inland Seas*, Winter 1951, Spring 1952.
- ROBINSON, H. A., Preparing Ships for an Inland Trip, 2 pp.; *Trident*, March. Manchester Ship Canal.
- SCHOUP, JOAN AND HENRI, Life on Dutch Waterways, 5 pp.; *Geographical Mag.*, March.
- WATSON, J. W., The Mackenzie Basin, 9 pp.; *ibid.*, Feb.
- ZILLMER, A. T., The Erie-Tashmoo Race; *Inland Seas*, Spring. Classic race of sidewheelers, Cleveland to Erie, 1901; won by *City of Erie* by 45 seconds.

VII. Seaports

- ADEN PORT TRUST, *Port of Aden Annual*; 25; Aden. Several articles by Villers et al.
- ANDERSEN, K. A., USN, Chicago, Seaport on a Prairie, 8 pp.; *S&S*, March.
- BLANK, J. S., Montreal: Check Valve of Canadian Commerce, 10 pp.; *S&S*, Feb.
- CALKINS, R. H., High Tide: The Big Stories of Seattle's Waterfront; *Marine Digest*, final episodes of long series, 5 Jan., 12 Jan. Soon to appear in book form.
- CAVANAGH, E. F., The City and the Port, 7 pp.; *Polaris*, Winter 1951-1952. By New York City Commissioner of Marine & Aviation.
- Colombo, Chief Port of Ceylon, 2 pp.; *Trident*, Feb.
- (DARTON, IRIS), Nelson Relics in Antigua, 2 pp.; *Ill. London News*, 22 March. Views and description of old English Harbour naval base.
- DOODY, JOHN, Aphrodite's Isle, 3 pp.; *Trident*, March. Cyprus.
- ELLS, AYTOUN, *Three Hundred Years on London River: The Hay's Wharf Story, 1651-1951*, 133 pp.; 30s; London, Bodley Head. 'Wharves on the south bank of the river from Bankside to Tower Bridge.'
- FORD, N. D., Antwerp, Bustling Port of Belgium, 8 pp.; *S&S*, Jan. Like other *S&S* port studies, includes large, detailed map.

- JAMES, T. G., Portsmouth, Britannia's Sally Port, 32 pp.; *Nat. Geog.*, April. Numerous illustrations of old naval base in color.
- LARSEN, ERLING, Duluth-Superior: Port of Heavy Tonnage, 6 pp.; *S&S*, May.
- LAYNG, CHARLES, Mobile: Port of Six Flags, 6 pp.; *ibid.*, April.
- NEW OIL Port of the Persian Gulf, 3 pp.; *Trident*, Jan. Kuwait.
- OLIVER, F. L., San Francisco Harbor One Hundred Years Ago, 4 pp.; *USNIP*, April.
- PHILLIPS, HUGH, *The Thames about 1750*, 227 pp.; 63s; London, Collins. Many pictures, with comments.
- ROLLE, A. F., William Heath Davis and the founding of American San Diego, 16 pp.; *Cal. Hist. Soc. Quar.*, March. Considerable material on Pacific coastwise shipping, 1849-1853.
- SAVILL, MERWYN, *Tide of London*; \$10.00; N. Y., British Book Center. A third story of the Thames.
- VERSE, M. H., Pirate's Nest of New York, 11 pp.; *Harper's*, April. Waterfront racketeering. See also L. Velie in *Collier's*, 9 Feb.
- WINN, R. H., Memories and Legends of Old Cape Neddick, 4 pp.; *Shoreliner*, April. To continue with account of coasting firewood from this Maine locality to Boston.
- (See also Index to Maritime Periodicals, *Polaris*, Winter 1951-1952, under headings: Ports, Cargo Handling, Ore Terminals.)

VIII. Shipbuilding and Allied Topics

- ALBION, R. G., The Timber Problem of the Royal Navy, 1652-1862, 19 pp.; *Mariner's Mirror*, Feb. Summary of author's *Forests and Sea Power*.
- BILMAN, A. A., Wage Chronology, Pacific Coast Shipbuilding, 1941-51, 6 pp.; *Monthly Labor Rev.*, March.
- BROWNING, A. P., Old Shipyard, 4 pp.; *Sea Breezes*, Jan. Description of Harvey yard at Littlehampton, Sussex.
- EMBERG, R. A., see Section VI.
- GARDNER, JOHN, Tools of the Boatbuilding Trade: Mallet Sings like a Bird; *Maine Coast Fisherman*, March.
- Calker Develops Whalebone Wrist; *ibid.*, April.
- Live Oak Stock and Sheffield Iron; *ibid.*, May.
- MUCKLE, W., *Modern Naval Architecture*, 154 pp.; 9s 6d; London, Temple. Survey of developments in recent years.
- Shipbuilders of Thomaston, *ctd.*; *Log Chips*, March. Capt. Charles E. Ranlett and Capt. Harvey Mills.

IX. Naval to 1939—North America

- DUDDY, F. E., USNR, Cruisers in the U. S. Navy, 14 pp.; *USNIP*, March. Summary of whole evolution.
- ELICOTT, J. M., USN, Recollections of Admiral Sims, 4 pp.; *ibid.*
- Theodorus Bailey Meyers Mason, Founder of the Office of Naval Intelligence, 4 pp.; *ibid.*
- KURLIN, HYMAN, Commodore Perry and the Bonin Islands, 8 pp.; *ibid.*
- MERRILL, J. M., The Hatteras Expedition, August 1861, 16 pp.; *N. C. Hist. Rev.*, April.
- (MEYERS, W. H., USN), Gunner Meyers in California, 7 pp.; *ibid.*, Jan. Reproduction of ten sketches of naval aspects of California operations in Mexican War by gunner on *Dale*.
- Short Story of the USS St. Marks; *Maritima* (N. Y. Maritime College), Jan.
- STANDLEY, W. H., USN, Naval Aviation, an Evolution of Naval Gunfire, 6 pp.; *USNIP*, March. Early illustrative examples, by former CNO.

X. Naval to 1939—Other Regions

- ALBION, R. G., see Section VIII.
- ANDERSON, R. C., *Naval Wars in the Levant, 1559-1853*, 619 pp.; \$7.50; Princeton. Companion work to his Baltic study.
- BALLARD, G. A., RN, The Fighting Ship from 1860 to 1890, 11 pp.; *Mariner's Mirror*, Feb.
- BINNS, EUGENE, *The Last King of Paradise*; N. Y., Pellegrini & Cudahy. David Kalakaua, last king of Hawaii. Esp. Ch. 5, 'The British Navy takes Hawaii'; Ch. 13, 'The U. S. Wants Pearl River Harbor'; Ch. 30, 'The King's Nav-ee'; Ch. 31, 'Bismarck Issues an Ultimatum'; Ch. 37, 'The U. S. Passes the Ammunition.'

- BOWEN, F. C., *Wooden Walls in Action*, 144 pp.: 21s; London, Staples. Typical Bowen picture book, with accounts of battles from Sluys to Lissa.
- FEAKES, H. J., RN, *White Ensign—Southern Cross: A Story of the King's Ships of Australia's Navy*, 246 pp.: 42s; Sydney, Ure Smith. Account by a late British admiral, from beginnings to late 1930's.
- (HUCUL, W. C., *The Evolution of Russian Sea Power, 1853-1951*; Ph.D. thesis in progress at University of California, Berkeley.)
- LOUIS, H. B., *Admiral Sir Thomas Louis, Bt.*; 6s 6d; St. Edwards College, Malta.
- MEAD, H. P., RN, Description of Royal and Signal Colours, etc., Pt. II; *Mariner's Mirror*, Feb.
- POLLAK, E. G., USN, From Dover Strait to Corregidor Deep, 4 pp.: *USNIP*, Feb. First British aircraft carrier *Engadine*, later serving in Philippines.
- ROBINETT, C. M., USN, Ship Technology and the Defeat of the Armada, 11 pp.: *ibid.*
- THURSFIELD, H. G., RN, ed., *Five Naval Journals, 1789-1817* (Navy Records Soc. Pub.): 45s (free to members). Includes journals of a chaplain, surgeon, midshipman and able seaman.

XI. World War II and Postwar Naval

- BALDWIN, H. W., When the Third Fleet met the great Typhoon, 5 pp.: *Reader's Digest*, March. Cut down from *N. Y. Times Mag.*, 16 Dec. 1951.
- (CASSADY, J. H., USN), First Story of Naval Air Power, 6 pp.: *U. S. News*, 18 Jan. Based on interview with Deputy CNO (Air).
- CHELL, R. A., *Troopship*, \$1.50; N. Y., British Book Center. Experiences in Transport, World War II; see Holliday, below, same title.
- EDMONDS, J. E., Hitler at Dunkirk and his preparations for the Invasion of England, 5 pp.: *Army Quarterly*, Jan.
- GERBER, RALPH, USN, The Engineering Duty Only Officer in the Navy Today, 5 pp.: *USNIP*, March.
- GOLDINGHAM, C. S., RM, United States Submarines in the Blockade of Japan in the 1939-1945 War, 12 pp.: *United Service*, Feb. To be continued.
- HOLLIDAY, KATE, *Troopship*, 188 pp.: \$3.50; N. Y., Doubleday. Voyage of MSTs troopship, San Francisco to Korea; see Chell, same title.
- HOWARD, W. S., Japanese Destroyers in World War II, 9 pp.: *USNIP*, Jan.
- INGRAM, M. D., USN, The United States Navy in Japan, 1945-1950, 6 pp.: *ibid.*, April.
- LANGDON, R. M., Live Men Do Tell Tales, 7 pp.: *ibid.*, Jan. Attempt by U-852 to kill all survivors from sinking Greek freighter, with subsequent trial by War Crimes Court.
- MCCRACKEN, A. R., Canton Flower Boat, 10 pp.: *ibid.*, April. USS *Mindanao*, river gunboat, flagship of South China Patrol, late 1941.
- MULLER, E., Exploits of the Navy's Frogmen, 4 pp.: *Reader's Digest*, April.
- MURPHY, F. X., *Fighting Admiral*; \$3.00; N. Y., Vantage. Story of Rear Admiral 'Dan' Callaghan, killed in Guadalcanal action.
- PETERSEN, W. J., The Battleship Iowa—U.S.S. *Iowa* (BB 61) . . . , 32 pp.: *The Palimpsest*, March. Popular description and historical sketch of the ship, with account of junket by a party of Iowans aboard her in Nov. 1951 and very brief notes on warships named for state of Iowa. On last subject, see also 'Iowa Navy Afloat,' 8 pp.: *Annals of Iowa*, Jan. 1946.
- SHAW, J. C., USN, Commanding a Mothballed, 8 pp.: *USNIP*, Feb. Recommissioning a destroyer, late 1950. Prior to that duty, the author had been preparing the first drafts of some of the Morison studies.
- WARDLOW, CHESTER, *The Transportation Corps: Responsibilities, Organization, and Operations* (U. S. Army in World War II, The Technical Services), 454 pp.: \$3.25; Washington, G.P.O. for Office of Chief of Mil. Hist. (1951). Esp. Ch. 5, The Critical Role of Shipping; Ch. 6, Relations with Other Ship Operating; Ch. 7, Operations of the Army's Large and Small Vessels; Ch. 8, Other Marine Operations and Problems.
- WILMET, CHESTER, *The Struggle for Europe*, 266 pp.: \$5.00; N. Y., Harpers. A somewhat iconoclastic Australian view; see esp. Ch. 13-14, Normandy.
- WYLIE, J. C., USN, Reflections on the War in the Pacific, 11 pp.: *USNIP*, April.
- YOSHIDA, MITSURU, The End of the *Yamato*, 15 pp.: *ibid.*, Feb. Account by a former ensign who was on the great ship's last run. Edited by Roger Pineau.

XII. Marine Art, Ship Models, Collections, Exhibits

- KEMBLE, J. H., Two Continental Marine Museums, 1 p.; *Log Chips*, March. Musée de la Marine, Paris; Musée Maritime, Barcelona.
- KERSHAW, PHILIP, Denmark's Maritime Museum, 2 pp.; *Sea Breezes*, Jan. 'Trade and Shipping Museum' at Elsinore.
- MEYERS, W. H., see Section IX.
- MYSTIC SEAPORT, 2 pp.; *Motor Boating*, April.
- RADCLIFFE, W. T., *Lovely Ladies of the Sea*; S&S, April. Reproduction of six figureheads from Mariners' Museum.
- TRUXTON-DECATUR NAVAL MUSEUM, *United States Submarines in Action, 1900-1952*, 20 pp. processed; 10 cents; Washington, The Museum. Catalogue of exhibit opening May 13.

Addenda, 1945-1951

- ANDERSON, E. B. (and R. M.), *Sailing Ships of Ireland*, 281 pp.; 18s 6d; Dublin, Morris, 1951. Completed by R. M. Anderson after the death of his brother in 1947. Concentrates on nineteenth century; includes sections on paddle-steamer owners and shipbuilding companies.
- ANDERSON, JOHN, *Last Survivors in Sail*, 71 pp.; 3s; London, P. Marshall, rev. ed., 1948.
- *Coastwise Sail*, 69 pp.; 3s; *ibid.*, 1948.
- *The Grain Race, a Complete History from 1921 to 1939*, 36 pp., processed; 2s 6d; Falkirk, Scotland, The Author (Spindrift Publications), 1948.
- *Last Days of the Sea Queens*, 3 parts, 30, 31, 28 pp.; 2s 6d, 2s 6d, 3s; parts 1 and 2 processed, part 3 printed; *ibid.*, 1947-1949. Out of print.
- ASAE, SHINSUKE, Shipping Industry Survey; *Contemporary Japan*, July 1951. Japanese situation.
- BARGER, HAROLD, *The Transportation Industries, 1889-1946*; Nat. Bureau of Econ. Research, 1951.
- BETHLEHEM STEEL CO., Shipbuilding Div., *1849-1949, a Century of Progress*; 32 pp.; San Francisco, The Company, 1949. History of the San Francisco yard, formerly Union.
- *Shipbuilding, Ship Repairing, Ship Conversion*, 42 pp.; N. Y., The Company, 1946. Largely pictorial.
- BLUMENTHAL, GUNTHER, Operation 'Sealion,' 8 pp.; *Irish Defence Journal*, Jan. 1949. Discussion of proposed invasion of England, by a German general.
- BRYANT, S. E., comp., *District of Kennebunk. A List of Vessels built from 1800 to 1873. With a Supplement from 1874 to 1884*, 16 pp.; Kennebunk, Me., Brick Store Museum, 1950. 'Reproduced by offset lithography from original documents in the Museum.'
- CAMP, W. M., *San Francisco, Port of Gold*, 518 pp.; \$5.00; Garden City, Doubleday, 1947.
- CUSHING, J. E., *Captain William Matson (1849-1917). From Handy Boy to Shipowner*, 28 pp.; N. Y., Newcomen Soc., 1951.
- DUCANE, PETER, *High Speed Small Craft*, 287 pp.; 30s; London, Temple Press, 1951. High speed planing hulls of PT type with discussion of machinery installation.
- FINNIE, RICHARD, ed., *Marinship, the History of a Wartime Shipyard, Marinship Corp.*, 403 pp.; San Francisco, The Corporation, 1947.
- GENERAL ENGINEERING AND DRYDOCK COMPANY, *Ship Repair and Conversion*, 100 pp.; San Francisco, The Company, n.d. Largely pictorial.
- GIBBS, H. M., Pope & Talbot's Tugboat Fleet, *Pac. Northwest Quar.*, Oct. 1951. 1853-1937.
- GRAHAM, PHILIP, *Showboats. The History of an American Institution*, 224 pp.; \$3.75; Austin, U. of Texas, 1951.
- (HARLOW, NEAL, In the 1945-1950 list, p. 68, the two titles preceding Harlow's name should be attributed to him, rather than to the Hakluyt Society.)
- (HASSLOCK, T. D.), *The Diary of a German Immigrant*, ed. G. R. Mayfield; *Tenn. Hist. Quar.*, Sept. 1951. Wiesbaden to New Orleans, 1848-1849.
- HYDE, F. E., PARKINSON, B. B., MARRINER, S., *The Port of Liverpool and the Crisis of 1793; Economica*, Nov. 1951.
- JAMES, M. K., *The Fluctuations of the Anglo-Gascon Wine Trade during the Fourteenth Century; Econ. Hist. Rev.*, IV, no. 2, 1951.
- KAYE, M. W., *Sea Navigation*, 3 pp.; *Maritima*, Oct. 1951. Critical bibliographical article reproduced, with permission, from *British Book News*, March 1950.

- KRETSCH, LEO, The U-Boat War in the Mediterranean, 18 pp.; *Irish Defence Journal*, Aug., Sept. 1950. Account by a German vice admiral.
- LONG BEACH, Board of Harbor Commissioners, *The Port of Long Beach, California*, 48 pp.; Long Beach, The Board, 1948. Largely pictorial.
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